PB80-177140

Bibliography of Aquatic Ecosystem Effects, Analytical Methods and Treatment Technologies for Organic Compounds in Advanced Fossil-Fuel Processing Effluents

Wyoming Univ., Laramie

Prepared for

Environmental Research Lab.
Duluth, MN

Feb 80

U.S. Department of Commerce
National Technical Information Service
NTIS

United States
Environmental Protection
Agency

Environmental Research
Laboratory
Duluth MN 55804

EPA-600/3-80-026
February 1980

Research and Development

PB80-127140

EPA

Bibliography of Aquatic Ecosystem Effects, Analytical Methods and Treatment Technologies for Organic Compounds in Advanced Fossil-Fuel Processing Effluents

REPRODUCED BY
NATIONAL TECHNICAL
INFORMATION SERVICE
U. S. DEPARTMENT OF COMMERCE
SPRINGFIELD, VA. 22161

RESEARCH REPORTING SERIES

Research reports of the Office of Research and Development, U.S. Environmental Protection Agency, have been grouped into nine series. These nine broad categories were established to facilitate further development and application of environmental technology. Elimination of traditional grouping was consciously planned to foster technology transfer and a maximum interface in related fields. The nine series are:

1. Environmental Health Effects Research
2. Environmental Protection Technology
3. Ecological Research
4. Environmental Monitoring
5. Socioeconomic Environmental Studies
6. Scientific and Technical Assessment Reports (STAR)
7. Interagency Energy-Environment Research and Development
8. "Special" Reports
9. Miscellaneous Reports

This report has been assigned to the ECOLOGICAL RESEARCH series. This series describes research on the effects of pollution on humans, plant and animal species, and materials. Problems are assessed for their long- and short-term influences. Investigations include formation, transport, and pathway studies to determine the fate of pollutants and their effects. This work provides the technical basis for setting standards to minimize undesirable changes in living organisms in the aquatic, terrestrial, and atmospheric environments.

This document is available to the public through the National Technical Information Service, Springfield, Virginia 22161.

TECHNICAL REPORT DATA

(Please read Instructions on the reverse before completing)

1. REPORT NO. EPA-600/3-80-026	2.	3. RECIPIENT'S ACCESSION NO. PB80-177140
4. TITLE AND SUBTITLE Bibliography of Aquatic Ecosystem Effects Analytical Methods and Treatment Technologies for Organic Compounds in Advanced Fossil-Fuel Processing Effluents		5. REPORT DATE February 1980 issuing date
		6. PERFORMING ORGANIZATION CODE
7. AUTHOR(S) Michael D. Marcus, Harold L. Bergman, Duane A. Stoller, Stanley K. Brown and Pat A. Molhot		8. PERFORMING ORGANIZATION REPORT NO.
9. PERFORMING ORGANIZATION NAME AND ADDRESS Department of Zoology and Physiology University of Wyoming Box 3166, University Station Laramie, WY 82071		10. PROGRAM ELEMENT NO. EPA-IAG-D7-01173
		11. CONTRACT/GRANT NO. EPA/DOE ET-77-S-03-1761 ET-78-C-03-1761
12. SPONSORING AGENCY NAME AND ADDRESS Environmental Research Lab. - Duluth, MN Office of Research and Development U.S. Environmental Protection Agency Duluth, MN 55804		13. TYPE OF REPORT AND PERIOD COVERED
		14. SPONSORING AGENCY CODE EPA/600/03
15. SUPPLEMENTARY NOTES		

16. ABSTRACT

Advance fossil-fuel processing operations, including oil-shale retorting, coal gasification, coal liquifaction and tar-sands recovery, can result in chemically complex aqueous waste effluents. This bibliography compiles much of the recent literature (ca. 1970-1977) concerning effects of organic compounds in advanced fossil-fuel processing effluents when discharged into aquatic ecosystems, plus information available on analytical methods and treatment technologies for these organics. To compile the bibliography, nearly 500 organic compounds known to be constituents of fossil fuels and fossil-fuel processing effluents were crossed with a list of key words during a computerized search of six bibliographic data bases. The bibliography contains 1314 citations which are indexed by chemicals, key words, taxonomic categories and authors. This bibliography is intended especially for researchers working with advanced fossil-fuel processing effluents in aquatic environments, but may also be useful to those concerned with fossil-fuel processing effluents in terrestrial environments and to those working in pulp mill and pesticide research.

17. KEY WORDS AND DOCUMENT ANALYSIS

a. DESCRIPTORS	b. IDENTIFIERS/OPEN ENDED TERMS	c. COSATI Field/Group
Bibliography, ecosystem, analytical methods treatment technology, organic compound, fossil fuel, toxicant, aquatic, oil shale, tar sands, coal, fish, water	Aquatic	06
	Toxicology	0620
	Environmental Biology	0620
	Oil Shale	0807, 1108
	Fossil Fuels	0807
	Tar Sands	0807
	Coal	0807

18. DISTRIBUTION STATEMENT Release to Public	19. SECURITY CLASS *(This Report)* Unclassified	21. NO. OF PAGES
	20. SECURITY CLASS *(This page)* Unclassified	22. PRICE

EPA Form 2220-1 (Rev. 4-77) PREVIOUS EDITION IS OBSOLETE

☆ U.S. GOVERNMENT PRINTING OFFICE: 1980 -657-146/5600

EPA-600/3-80-026
February 1980

BIBLIOGRAPHY OF AQUATIC ECOSYSTEM EFFECTS, ANALYTICAL METHODS AND TREATMENT TECHNOLOGIES FOR ORGANIC COMPOUNDS IN ADVANCED FOSSIL-FUEL PROCESSING EFFLUENTS

Compiled by

Michael D. Marcus and Harold L. Bergman
Department of Zoology and Physiology

Duane A. Stoller and Stanley K. Brown
Division of Computer Services

Pat A. Molholt
Science and Technology Library

The University of Wyoming
Laramie, Wyoming
82071

Prepared under an Interagency Agreement between U.S. EPA and U.S. DOE funded through DOE Contracts ET-77-S-03-1761, ET-78-C-03-1761 and DE-AS20-79-LC-01761; Task Agreement #001.

Project Officers

Ken Biesinger and Len Mueller
Environmental Research Laboratory
Duluth, Minnesota 55804

David Farrier and Larry Harrington
Laramie Energy Technology Center
Laramie, Wyoming 82071

ENVIRONMENTAL RESEARCH LABORATORY
OFFICE OF RESEARCH AND DEVELOPMENT
U.S. ENVIRONMENTAL PROTECTION AGENCY
DULUTH, MINNESOTA 55804

1-A

DISCLAIMER

This report has been reviewed by the Environmental Research Laboratory-Duluth, U.S. Environmental Protection Agency, and approved for publication. Approval does not signify that the contents necessarily reflect the views and policies of the U.S. Environmental Protection Agency, nor does mention of trade names or commercial proudcts constitute endorsement or recommendation for use.

FOREWORD

Our nation is confronting a mandate to develop synthetic fuels from coal and oil shale to reduce dependence on foreign oil supplies and to substitute for decreasing natural gas reserves. Achieving the level of synthetic-fuel production necessary to significantly contribute to U.S. energy supplies requires establishment of many facilities devoted to coal gasification, coal liquifaction, and oil-shale retorting. Each of these technologies produce complex waste waters containing numerous organic contaminants, many present in high concentrations. Few of these organic constituents have been studied adequately to determine potential effects in aquatic environments or possible routes of exposure to man and subsequent effects on human health.

As an aid to research scientists and others concerned with environmental and health effects associated with synfuels development, this indexed bibliography compiles many of the citations for the literature published between 1970 and 1977 pertaining to aquatic ecosystem effects, analytical methods and waste treatment technologies for many organic compounds in effluents from advanced fossil-fuel technologies. This bibliography not only identifies literature pertaining to individual organic constituents but also identifies many constituents for which little or no published information exists. This will aid investigators in selecting those compounds where additional research is required while also avoiding unnecessary duplication of research on those compounds for which adequate data exist.

J. David Yount
Acting Director
Environmental Research Laboratory
Duluth, Minnesota

ABSTRACT

Advance fossil-fuel processing operations, including oil-shale retorting, coal gasification, coal liquifaction and tar-sands recovery, can result in chemically complex aqueous waste effluents. This bibliography compiles much of the recent literature (ca. 1970-1977) concerning effects of organic compounds in advanced fossil-fuel processing effluents when discharged into aquatic ecosystems, plus information available on analytical methods and treatment technologies for these organics. To compile the bibliography, nearly 500 organic compounds known to be constituents of fossil fuels and fossil-fuel processing effluents were crossed with a list of key words during a computerized search of six bibliographic data bases. The bibliography contains 1314 citations which are indexed by chemicals, key words, taxonomic categories and authors. This bibliography is intended especially for researchers working with advanced fossil-fuel processing effluents in aquatic environments, but may also be useful to those concerned with fossil-fuel processing effluents in terrestrial environments and to those working in pulp mill and pesticide research.

CONTENTS

Page

Foreword. iii

Abstract. iv

List of Tables. vi

Acknowledgments vii

Introduction. 1

Guide to the Bibliography 6

Literature Cited. 12

Chemical Index. 16

Key-word Index. 41

Taxonomic Index 59

Author Index. 69

Bibliographic Citations 130

TABLES

Number Page

1 Issues and dates of hard copy indexes corresponding to the data-base material searched for the bibliography. 4

2 The two key-word lists crossed with the results of the chemical searches to obtain the initial set of citations included in this bibliography 5

ACKNOWLEDGMENTS

During the preparation of this bibliography we were fortunate to enlist the assistance of many individuals. To all we extend our deep appreciation. Duane Stoller developed the computer programs through which the bibliography was indexed and had responsibility for the final computer production. Stan Brown produced the text programs through which the citations were edited, sorted and formated for the final printing. Pat Molholt provided a great deal of help in the bibliographic data-base search through which the original collection of citations were obtained and assisted with the bibliography from its conception. Joan Anderson, Roseanne D'Andrea, Mick DeGraeve, Tim Fannin, Dianne Geiger, Rodney Johnson, Joseph Meyer, Ron Overcast, Michael Parker and Linda Zeveloff provided valuable assistance with various tasks. Finally, we were responsible for selection of the citations and indexing terms included in the bibliography. The support provided by the Division of Computer Services, University of Wyoming, Charles Folkner, Director, is greatly appreciated.

Our Project Management Team, comprised of Len Mueller and Kenneth Biesinger of the Environmental Research Laboratory-Duluth, U.S. EPA, and David Farrier, Larry Harrington and the late Robert Kerr of the Laramie Energy Technology Center, U.S. DOE, assisted in compiling the chemical list used in the searches and advised on the final publication.

A special thanks is extended to the personnel of the Bibliographic Retrieval Services, Inc., Schnectady, New York, for extraordinary assistance during our searches and for permission to use copyrighted information from their System Reference Manual in the section entitled "Guide to the Bibliography."

Many of the citations contained in this bibliography are copyrighted (1970-1978) and used with permission of the copyright holders. These citations may not be reproduced without their prior permission. The source of each citation in the bibliography is indicated by a letter following the "AN" label on the final line of each citation. Following are the copyright holders and their addresses which correspond to the letters.

B: Biosciences Information Service
H. E. Kennedy, Executive Director
2100 Arch Street
Philadelphia, Pennsylvania 19103

C: Chemical Abstracts Service
F. A. Healy, Manager
Operational Control
P.O. Box 3012
Columbus, Ohio 43210

D: Dissertation Abstracts International
P. M. Colling, Manager
Editorial, School, Library and Author Relations
University Microfilms International
300 North Zeeb Road
Ann Arbor, Michigan 48106

P: Pollution Abstracts
Loene Trubkin, President
Data Courier, Inc.
620 South Fifth Street
Louisville, Kentucky 40202

Citations from the following two bibliographic data bases are prepared by the United States Government and are not subject to copyright under the Federal Copyright Act.

M: Medlars
National Institute of Health
Department of Health, Education and Welfare
9000 Rockville Pike
Bethesda, Maryland 20014

N: National Technical Information Service
Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22161

We would appreciate any suggestions from the users of this bibliography on how we may improve subsequent updates of this document.

M. D. Marcus
H. L. Bergman
Department of Zoology and Physiology
University of Wyoming
Box 3166, University Station
Laramie, Wyoming 82071

INTRODUCTION

Advanced fossil-fuel processing operations, including oil-shale retorting, coal gasification, coal liquefaction and tar-sands recovery, can generate chemically complex aqueous waste effluents. While these effluents have many common organic and inorganic components, the composition of an effluent depends both on the process technology involved and on characteristics of the fossil fuel. The potential release of such waters to aquatic ecosystems poses questions about the maximum concentrations of effluent constituents which can be safely tolerated by resident aquatic organisms. To obtain answers to these questions one must consider factors related to the compounds, including degradability, toxicity, bioaccumulation and cycling. Effects of both single compounds and mixed solutions of these effluent constituents must be integrated in the answers. When problem compounds are identified, appropriate waste-treatment technologies must be defined which will reduce to an acceptable level the hazards of effluent releases.

Considerable literature exists on the response of aquatic ecosystems to inorganic compounds and the fate of these compounds in such systems. Much of this information has been summarized and reviewed (e.g., Battelle Columbus Laboratories 1971, Committee on Water Quality Criteria 1973, Kemp et al. 1973, McKee and Wolf 1963, and the reviews published annually in the Journal of the Water Pollution Control Federation, e.g., Shuman and Fogleman 1978). However, the literature dealing with fossil-fuel associated organic compounds in aquatic systems is widely dispersed. Bibliographies and reviews are available on advanced fossil-fuel processing technologies (e.g., Braunstein et al. 1977; Rogers 1974; Smithsonian Science Information Exchange, Inc. 1976; U.S. Atomic Energy Commission 1974; U.S. Department of Energy 1977) and on general aspects of organic compounds introduced to aquatic ecosystems (e.g., Becker and Thatcher 1973; Braunstein et al. 1977; Hundemann 1977; A. D. Little, Inc. 1970; McKee and Wolf 1963; Ryckman et al. 1966; Smith 1974; and the annual Journal of the Water Pollution Control Federation reviews, e.g., Chian and DeWalle 1978). Yet the literature has not previously been adequately compiled concerning effects of organic compounds in advanced fossil-fuel processing effluents when discharged into aquatic ecosystems. This bibliography was undertaken to compile much of the recent literature (ca. 1970 through 1977, see Table 1) pertaining to the relationships of these organic compounds to aquatic ecosystems. Also included is information on available treatment technologies and analytical methods for these organic compounds.

This bibliography is compiled from six computerized bibliographic data bases: Biosis Previews (Biological Abstracts and BioResearch Index), Chemical Abstracts Condensates, Comprehensive Dissertation Abstracts, Medlars (Index Medicus), National Technical Information Service Abstracts

(NTIS Government Reports Abstracts) and Pollution Abstracts. Nearly 500 organic compounds were included in the search of these data bases; all have been identified as constituents of fossil fuels and fossil-fuel processing effluents (Barbour et al. 1978; Dark et al. 1977; Denver Research Institute and Environmental Engineering Division 1977; Forney et al. 1974; Gulf South Research Institute 1977a, 1977b, 1978; Hangebrauck 1977; Herbes et al. 1976; Hills et al. 1968; King et al. 1975; Pellizzari 1978; Schmidt et al. 1974; Schmidt-Collerus 1974, 1976; Skeist Laboratories, Inc. 1969; and unpublished data obtained from the Laramie Energy Technology Center). Synonymous chemical names were obtained for each chemical compound identified (Christensen and Luginbyhl 1975, Weast 1977, Windholz et al. 1976, Verschueren 1977). Following a data-base search of the entire chemical list, the results were sequentially crossed with the first list followed by the second list of key words shown in Table 2 to obtain those citations most pertinent to this bibliography. Then results were loaded onto computer tapes for final editing to retain only relevant citations and remove duplicate citations from different data bases. The complete bibliography was indexed by chemicals, key words, taxonomic categories and authors through computer processing.

This bibliography includes a total of 1314 citations. Many of these citations pertain to published work on phenol and cyanide. Other compounds have considerably fewer citations, revealing the scarcity of published information available on these compounds. While all chemicals included in this bibliography have been found in fossil fuels and related effluents, not all have been identified as contained in advanced fossil-fuel processing effluents. However, they are all chemically related to identified compounds and may eventually be identified in such effluents. Information available on these related compounds may help interested researchers to devise appropriate analytical methods and to predict the environmental fates of compounds found in effluent waters.

In addition to containing information pertinent to organic compounds in freshwater environments, selected citations are included which apply to marine and terrestrial environments. This has been particularly emphasized in the case of the degradation literature because many microbial and physical degradative processes are ubiquitous. For example, much research has been completed on the fate of marine and terrestrial petroleum and advanced fossil-fuel processing effluents share many compounds.

Since chlorinated hydrocarbons are not generally associated with effluents from advanced fossil fuel technologies, only general review papers are included here. However, we would like to emphasize that chlorination of complex organic effluents substantially increases the environmental hazard of the effluent (e.g., Adelman et al. 1976; EIFAC 1973; Kobayashi and Akitake 1975a, 1975b; Kopperman et al. 1974; Pickering and Henderson 1966).

We hope this bibliography will be useful not only to researchers working with advanced fossil-fuel processing effluents in aquatic environments but also to investigators of other environments concerned with all fuel processing effluents, e.g., coking and petroleum industries, as well as those in the areas of pulpmill and pesticide research.

Table 1. Issues and dates of hard copy indexes corresponding to the data-base material searched for the bibliography.

Index	Initial			Final		
	Vol.	No.	Date	Vol.	No.	Date
Biological Abstracts	51	1	January 1, 1970	65	8	April 15, 1978
BioResearch Index	6	1	January, 1970	14	4	April, 1978
Chemical Abstracts	72	1	January 5, 1970	87	26	December 26, 1977
Dissertation Abstracts	20	7	January, 1960	38	10	April, 1978
Medlars	10	-	January, 1969	19	5	May, 1978
NTIS[a]	70	1	January 1, 1970	78	8	April 14, 1978
Pollution Abstracts	1	1	May, 1970	8	6	November, 1977

[a] Equivalent hard copy is "Government Reports Announcements and Index."

Table 2. The two key-word lists crossed with the results of the chemical searches to obtain the initial set of citations included in this bibliography ($ is a truncation device to include in the search all words beginning as indicated to the $. Numbers following the $ limit the number of words searched only to those containing the number of letters indicated beyond the truncation point, e.g., "LAKE$1" includes "LAKES" but not "LAKEWOOD.").

List 1

CHROMATOGRAPH$5
EXTRACT$9
IDENTIF$9
ANALY$7
SEPARAT$7
DIGEST$9
STRUCTURE ACTIVITY
PARTITION COEFFICIENT

FISH
FISHES
TROUT$1
MINNOW$1
INVERTEBRAT$1
LARVA$1
DAPHNIA$
WATER FLEA$1
CLADOCERA$
COPEPOD$
ROTIFER$

AQUATIC INSECTS
AQUATIC ANIMALS
AQUATIC LIFE
PHYTOPLANKT$4
ZOOPLANKT$4
PLANKT$4
ALGA$
BACTERIA$2
MICROB$3
MICROORGANISM$
AQUATIC$1

LAKE$1
POND$1
POOL$1
STREAM$1
BROOK$1
CREEK$1
RIVER$1
TRIBUTAR$3
FRESHWATER$1
WATER$1
ECOSYSTEM$
MICROCOSM$
EFFLUENT$
AQUEOUS

List 2

TOXIC$11
BIOASSAY$1
POLLUT$4
AVOID$5
TOLERA$4
ACUTE$
CHRONIC$
ACCLIMAT$8
LETHAL$3
MORTAL$3
SURVIV$7
GROWTH
REPRODUC$7

ENZYM$8
PHYSIOLOG$6
PATHOLOG$6
HISTOPATHOLOG$6
HISTOLOG$6
DEGRAD$7
OXIDAT$13
BIOACCUMULAT$4
BIOMAGNIFICAT$4
BIOCONCENTRAT$4

ACCUMULAT$4
MAGNIFICAT$4
CONCENTRAT$4
METABOL$7
NEUROLOG$6
EMBRYO$8
CYCLE
CYCLES
CYCLING

GUIDE TO THE BIBLIOGRAPHY

This bibliography is arranged in five sections: the chemical index, the key-word index, the taxa index, the author index and the citations. Following each term in the indexes are numbers corresponding to the numbers of the citations in which the term appears. The chemical index contains all compounds included in the searches; selected chemical synonyms are cross referenced to the principal entry, generally that spelling which was used by the source reference where the compound was identified. Only blank spaces follow those compounds for which the search failed to produce any information.

The key-word index contains terms used in searching the chemical compounds (cf. Table 2) as well as additional useful terms. As with the chemical index, similar terms are referenced to a principal term (e.g., "decomposition see degradation" and "bioassays see toxicology, bioassays").

Both general and specific taxonomic groups are alphabetically compiled in the taxa index. General taxonomic groups (e.g. bacteria, crustaceans, fishes, etc.) are followed by the list of citation numbers having information on these groups, while specific taxonomic groups (e.g. coliform, *Pseudomonas*, *Daphnia*, etc.) present a listing of citations having information on these more limited groups. In many cases the citations for several lower taxonomic classifications are grouped under a higher classificational category; in such cases the interested user is referenced to the appropriate classification to obtain the citations (e.g. "bluegill see Fishes, Centrachidae").

The author index includes all authors listed in the citations. Due to the various formats used by the data bases, authors may have more than one entry in the index (e.g., "Smith JD," "Smith, JD" and "Smith, John D").

The citations are compiled alphabetically by lead authors. However, as with the author index, variations in format between the data bases occasionally cause unavoidable but manageable shifts in the ordering of the citations for an author. Each citation is preceded with a number on which the indexing is based. In general, following the citation number is the author(s), work location, publication year, publication title (translated title if a foreign language title is present), publication source and other availability information, language of the publication, abstract and/or key words, and, finally, a code indicating both the data-base source of the citation and that source's index number for that citation. The final entry permits the user of this bibliography to go to the printed source citation (e.g., Chemical Abstracts or Pollution Abstracts) to obtain any additional information available. A two-letter paragraph label (e.g., *AU*) precedes each type of information included in the citation. Since the type of information available and the presentation format varies among the data bases, a brief presentation by data base follows which explains what is included in each paragraph and the meaning of some of the codes used in these paragraphs. Complete guides to the codes can be found in the printed versions of bibliographies from which the citations were obtained. These are available in most science and technology libraries.

BIOSIS PREVIEWS

< >	Bibliographic citation number.
AU	Author(s).
YR	Two-digit year in which the publication containing the citation was published.
TI	Title which may be edited from the published title.
SO	Abbreviated journal title (see Biosis List of Serials available in most libraries), volume, issue number and pagination.
DE	Descriptors added to the references by the indexing staff at BIOSIS to denote subject content not adequately covered by the title.
AN	*B* followed by a unique eight-digit number: the first two numbers indicate volume number (numbers less than 66 indicate *Biological Abstracts*, numbers greater than 66 indicate *BioResearch Index*), the last six digits correspond to its citation number in the appropriate printed issue of the source.

CHEMICAL ABSTRACTS CONDENSATES

< >	Bibliographic citation number.
AU	Author(s).
IN	Institution or organization name and address where the reported work was performed.
YR	Two-digit year in which the journal containing the citation was published or the year the conference was held where the paper was presented.

TI	Title of the original document which may be edited and is always in English.
TR	Foreign language title if TI is a translated title.
SO	For journal citations this paragraph contains the abbreviated journal title according to the *Chemical Abstracts Service Source Index*, volume, issue, pagination and publication date; for conference papers, the title of the conference proceedings, pagination of the paper in the proceedings and the date of the conference in day-month-year format.
PB	Publisher name for books and conferences and the abbreviation for the country of publication.
PG	Number of pages for books, technical reports and dissertations.
LG	Two-letter code for language.
DE	Descriptors or phrases assigned by Chemical Abstract Service to provide additional subject access to the document.
AN	*C* followed by a unique eleven-digit number: the first three digits are the volume number, the next two digits are the issue number and the last six digits correspond to the citation number in the appropriate printed number of *Chemical Abstracts*.

COMPREHENSIVE DISSERTATION ABSTRACTS

< >	Bibliographic citation number.
AU	Author(s).
IN	Institution granting the degree, a unique four-digit code representing that institution, the type of degree, date and number of pages, if known.
YR	Two-digit year in which the degree was granted.
TI	Title of the dissertation in English; if the dissertation is in a foreign language a notation of the language will be made in parentheses at the end of the English-translated title.
SO	Source of printed publication within which the thesis citation appears; indicating DAI for *Dissertation Abstracts International* for which the volume, issue, section and page are noted and ADD for *American Doctoral Dissertations* for which the volume, issue and page are presented.

DE	Descriptor of the subject and its corresponding four-digit code assigned by the author.
AN	*D* followed by ADG to indicate the data base vendor through which the citation was obtained, followed by the University Microfilm order number required to obtain full copies of the dissertation.

MEDLARS

< >	Bibliographic citation number.
AU	Author(s).
IN	Institution from which reprints of the article may be obtained, usually the organization with which the author(s) is(are) affiliated.
YR	Two-digit year in which the journal containing the citation was published.
TI	Title of the article or monograph, if a foreign title the English translated title is presented.
TR	Foreign language title or transliterated title, when the foreign language title does not use the Roman alphabet.
SO	Journal title abbreviation in *Index Medicus* format, volume, issue, pagination and publication date; if the article is a review the number of references may also be included.
LG	Two-letter code for language.
MJ	Terms from the controlled vocabulary Medical Subject Headings (MeSH) assigned by the National Library of Medicine (NLM) indexer to denote the major subject emphasis of the article, two-letter MeSH subheadings may be attached to the main headings.
NM	Additional terms indexed as for MJ which denote subject coverage of the article which is less emphasized than MJ.
AN	*M* followed by an eight-digit sequential accession number assigned by NLM, this is generally followed by a second four-digit number denoting the year and month in which the citation may be found in the printed *Index Medicus* or one of the other NLM indexes.

NATIONAL TECHNICAL INFORMATION SERVICE ABSTRACTS

< >	Bibliographic citation number.
AU	Author(s).
IN	Institution where the research was performed and the report prepared (typically the organization with which the author is affiliated), followed by the sponsoring organization(s) and any cooperating organization(s), and this may be followed by a six-digit code assigned to the sponsoring organization by the agency contributing the document to NTIS.
YR	Two-digit year the report was written; however, sometimes (almost always on translations and journal articles) this date corresponds to some other time such as the date of translation, issue or publication. Also, the total number of pages in the report is included in this paragraph.
TI	Original title as written by the author(s) or the translated title.
NT	Contains information which describes the report type (e.g., a technical report or a final report), translation source, periodical citation source, related reports, language of the report, etc.
AV	Availability of the report whenever there are any special instructions or special sources other than NTIS for ordering the report.
PR	NTIS prices or price codes for paper copies (PC) and microfiche copies (MF) of the report.
AB	Abstract of citation.
MJ	Controlled vocabulary subject terms from a NTIS thesaurus assigned to denote the major subject emphasis of the document.
MN	Term from the controlled thesaurus assigned to denote additional but perhaps less important subject coverage.
ID	Keywords not necessarily selected from the controlled thesaurus.
AN	N followed by the primary NTIS accession number for the report; this number should be used to order the report from NTIS.

POLLUTION ABSTRACTS

< >	Bibliographic citation number.
AU	Author(s).

IN	Institution or organization name and address where the work was performed; varying acronyms and abbreviations may appear, e.g., WHOI for Woods Hole Oceanographic Institution.
YR	Two-digit year when the journal containing the citation was published or when the conference containing the citation was held (not the year the conference proceedings were published).
TI	Title of the document as it appears in the original work; foreign language titles have not been translated.
SO	Title, volume, issue, pagination and date, when available, for journals, conference publications and reports; conference title, location, sponsor and inclusive dates are noted for conference proceedings; foreign journal titles, conference titles and addresses are not translated.
LG	Two-letter code for language.
ID	Subject terms which are assigned to identify specific entities or concepts within the document.
DE	Descriptors from the controlled vocabulary *Keyword Master List* assigned by indexers to denote subject content of the document.
AN	*P* followed by a unique seven-digit accession number: the first two digits represent the specific printed volume in which the citation was published followed by five digits for the sequentially assigned accession number.

LITERATURE CITED

Adelman, I. R., L. L. Smith, Jr. and G. D. Siesennop. 1976. Effect of size or age of goldfish and fathead minnows on use of pentachlorophenol as a reference toxicant. Water Res. 10:685-687.

Barbour, F. A., F. D. Guffey and S. M. Dorrence. 1978. Preliminary examination of waste waters produced during an in situ retorting of tar sands. p. 743-749 In: D. A. Redford and A. G. Winestock (eds.) The oil sands of Canada and Venezuela--1977. Can. Inst. Min. Metall. Spec. Pub. 17.

Battelle Columbus Laboratories. 1971. Water quality criteria data book Vol. 3. Effects of chemicals on aquatic life. U.S. Environ. Prot. Agency Water Pollut. Control Res. Ser. 18050GWV05/71.

Becker, C. D. and T. O. Thatcher. 1973. Toxicity of power plant chemicals to aquatic life. U.S. A.E.C. Wash-1249.

Braunstein, H. M., E. D. Copenhaver and H. A. Pfuderer (eds.). 1977. Environmental, health, and control aspects of coal conversion: an information overview. Oak Ridge Nat. Lab. Infor. Div., Oak Ridge, TN. ORNL/EIS-94. Vol. 1-2.

Chian, E. S. K. and F. B. DeWalle. 1978. Organics. J. Water Pollut. Cont. Fed. 50:1026-1061.

Christensen, H. E. and T. T. Luginbyhl (eds.). 1975. Registry of toxic effects of chemical substances: 1975 edition. Natl. Inst. Occup. Safety Health, Rockville, MD.

Committee on Water Quality Criteria. 1973. Water quality criteria 1972. U.S. Environ. Prot. Agency Ecol. Res. Ser. EPA-R3-73-033.

Denver Research Institute and Environmental Engineering Division. 1977. Volume II, preliminary environmental assessment, sampling and analysis procedures: Paraho demonstration retort. Denver Res. Inst., Univ. Denver.

Dark, W. A., W. H. McFadden and D. L. Bradford. 1977. Fractionation of coal liquids by HPLC with structural characterization by LC-MS. J. Chromatogr. Sci. 15(10):454-460.

European Inland Fisheries Advisory Commission Working Party on Water Quality Criteria for European Freshwater Fish. 1973. Water quality criteria for European freshwater fish: report on monohydric phenols and inland fisheries. Water Res. 7:929-941.

Forney, A. J., W. P. Haynes, S. J. Gasior, G. E. Johnson and J. P. Strakev, Jr. 1974. Analyses of tars, chars, gases and water found in effluents from the synthane process. U.S. Bur. Mines Tech. Prog. Rep. TPR 76.

Gulf South Research Institute. 1977a. Identification of components of energy-related wastes and effluents. Quarterly report II, February 15, 1977 - May 15, 1977. Gulf South Res. Inst., New Orleans, LA.

Gulf South Research Institute. 1977b. Identification of components of energy-related wastes and effluents. Quarterly report III, May 15, 1977 - August 15, 1977. Gulf South Res. Inst., New Orleans, LA.

Gulf South Research Institute. 1978. Identification of components of energy-related wastes and effluents. Quarterly report V, November 15, 1977 - February 15, 1978. Gulf South Res. Inst., New Orleans, LA.

Hangebrauck, R. P. 1977. Status of IERL-RTP program to develop environmental assessment methodology for fossil energy processes. U.S. Environ. Prot. Agency Indust. Environ. Res. Lab., Research Triangle Park, NC (preprint).

Herbes, S. E., G. R. Southworth and C. W. Gehrs. 1976. Organic contaminants in aqueous coal conversion effluents: environmental consequences and research priorities. Proc. 10th Annu. Conf. Trace Subst. Environ. Health, Univ. Missouri. June 7-10, 1976 (preprint).

Hills, I. R., G. W. Smith and E. V. Whitehead. 1968. Hydrocarbons from fossil fuels and their relationships with living organisms. Prepr., Div. Pet. Chem., Am. Chem. Soc. 13(4):B5-B18.

Hundermann, A. S. (ed.). 1977. Pollution and environmental aspects of fuel conversion (a bibliography with abstracts). U.S. Dept. Com. Nat. Tech. Infor. Ser. Springfield, VA. NTIS/PS-77/0212.

Kemp, H. T., R. L. Little, V. L. Holomon and R. L. Darby. 1973. Water quality criteria data book - Vol. 5. Effects of chemicals on aquatic life. U.S. Environ. Prot. Agency Off. Res. Develop. NTIS/PB-234-435.

King, S. B., C. F. Brandenburg and W. J. Lanum. 1975. Characterization of nitrogen compounds in tar produced from underground coal gasification. Prepr., Div. Pet. Chem., Am. Chem. Soc. 20:131-139.

Kobayashi, K. and H. Akitake. 1975a. Studies on the metabolism of chlorophenols in fish--I. Absorption and excretion of PCP by goldfish. Bull. Jpn. Soc. Sci. Fish. 41:87-92.

Kobayashi, K. and H. Akitake. 1975b. Studies on the metabolism of chlorophenols in fish--IV. Absorption and excretion of phenol by goldfish. Bull. Jpn. Soc. Sci. Fish. 41:1271-1276.

Kopperman, H. L., R. M. Carlson and R. Caple. 1974. Aqueous chlorination and ozonation studies. I. Structure-toxicity correlations of phenolic compounds to *Daphnia magna*. Chem.-Biol. Interact. 9:245-251.

Little, A. D., Inc. 1970. Water quality criteria data book, Vol. 1, organic chemical pollution of freshwater. U.S. Environ. Prot. Agency Water Pollut. Control Res. Ser. 18010DPV12/70. U.S. Govern. Print. Off., Washington, D.C. Stock No. 5501-0144.

McKee, J. E. and H. W. Wolf. 1963. Water quality criteria. The Resources Agency of California. State Water Resour. Control Board Pub. No. 3-A.

Pellizzari, E. D. 1978. Identification of components of energy-related wastes and effluents. U.S. Environ. Prot. Agency, Athens, GA. EPA-600/7-78-004.

Pickering, Q. H. and C. Henderson. 1966. Acute toxicity of some important petrochemicals to fish. J. Water Pollut. Control Fed. 38:1419-1429.

Rogers, M. P. 1974. A bibliography of Bureau of Mines publications dealing with oil shale and shale oil. U.S. Energy Res. Dev. Adm. Laramie Energy Res. Cent., Laramie, WY.

Ryckman, D. W., A. V. S. Prabhakara Rao and J. C. Buzzell, Jr. 1966. Behavior of organic chemicals in the aquatic environment. Manuf. Chem. Assoc., Washington, D.C.

Schmidt, C. E., A. G. Sharkey, Jr. and R. A. Friedel. 1974. Mass spectrometric analysis of product water from coal gasification. U.S. Bur. Mines, Adv. Energy Util. Technol. Program Tech. Prog. Rep. 86:1-6. NTIS/PB-240-835.

Schmidt-Collerus, J. J. 1974. The disposal and environmental effects of carbonaceous solid wastes from commercial oil shale operations. Denver Res. Inst., Univ. Denver.

Schmidt-Collerus, J. J. (Chairman). 1976. Proceedings of the first symposium on management of residuals from synthetic fuels production. Denver Res. Inst., Univ. Denver.

Shuman, M. S. and W. W. Fogleman. 1978. Inorganics. J. Water Pollut. Cont. Fed. 50:1000-1021.

Skeist Laboratories Inc. 1969. Chemical by-products from coal. U.S. Dep. Inter. Off. of Coal Res. Rep. No. 43. NTIS/PB180878.

Smith, A. L. 1974. The effects of effluents from the Canadian petrochemical industry on aquatic organisms. Environ. Can. Fish. Mar. Serv. Tech. Rept. 472.

Smithsonian Science Information Exchange, Inc. 1976. Ongoing oil shale research and development. U.S. Environ. Prot. Agency Off. Energy, Minerals and Industry.

U.S. Atomic Energy Commission. 1974. Coal processing: gasification, liquefaction, desulfurization. A bibliography 1930-1974. NTIS/TID-3349.

U.S. Department of Energy. 1977. Oil shale and tar sands--a bibliography. U.S. Dep. Energy Tech. Infor. Cent., Oak Ridge, TN.

Verschueren, K. 1977. Handbook of environmental data on organic chemicals. Van Nostrand Reinhold Co., NY.

Weast, R. C. (ed.). 1977. CRC handbook of chemistry and physics. CRC Press, Inc., Cleveland, OH.

Windholz, M., S. Budavari, L. Y. Stroumtsos and M. N. Fertig (eds.). 1976. The Merck Index. Merck and Co., Inc., Rahway, NJ.

CHEMICAL INDEX

NAMES WITH NUMERICAL PREFIXES FOLLOW ALPHABETICAL LISTING

ACENAPHTHALENE
(SEE ACENAPHTHENE)

ACENAPHTHENE
752, 981

ACENAPHTHENOL
(NO CITATIONS)

ACETALDEHYDE
20, 104, 306, 466, 1049, 1244

ACETAMIDE
470

ACETENE
(SEE ETHYLENE)

ACETIC ACID
184, 197, 281, 342, 380, 466, 470, 484
954, 1093, 1113, 1208, 1209, 1281, 1306

ACETIC ALDEHYDE
(SEE ACETALDEHYDE)

ACETONITRILE
105, 428, 470, 1151

ACETOPHENONE
67, 401, 612, 794, 852

ACETOXYBUTENE
(NO CITATIONS)

ACETYLENE
(SEE ETHYNE)

ACETYLENE TETRACHLORIDE
(SEE 1,1,2,2-TETRACHLOROETHANE)

ACRALDEHYDE
93, 156, 355, 356, 380, 930, 1149, 1247

ACRIDINE
(NO CITATIONS)

ACROLEIN
(SEE ACRALDEHYDE)

ACRYLALDEHYDE
(SEE ACRALDEHYDE)

ACRYLON
(SEE ACRYLONITRILE)

ACRYLONITRILE
22, 306, 720, 797, 971, 1119, 1151
1233, 1292

ADIANANE
(NO CITATIONS)

ALDEHYDE
10, 119, 130, 289, 334, 355, 356, 444
445, 471, 490, 554, 817, 911, 929, 1022
1105, 1244, 1247, 1313

ALKYL BENZENE
488

ALKYL PHENOL
(NO CITATIONS)

ALLYL CHLORIDE
(SEE 1-CHLORO-2-PROPENE)

ALNUSANE
(NO CITATIONS)

ALPHA-BUTYLENE
(SEE BUTENE)

ALPHA-COLLIDINE
(NO CITATIONS)

ALPHA-GAMMA-BUTADIENE
(SEE 1,3-BUTADIENE)

ALPHA-METHYLBENZYL ALCOHOL
(NO CITATIONS)

ALPHA-METHYLBUTYRONITRILE
(NO CITATIONS)

ALPHA-METHYLNAPHTHALENE
(SEE 1-METHYLNAPHTHALENE)

ALPHA-METHYLPYRIDINE
(SEE 2-METHYLPYRIDINE)

ALPHA-METHYLSTYRENE
923, 1105

ALPHA-NAPHTHOL
143, 175, 276, 523, 552, 661, 717, 759
780, 889

ALPHA-PHENYLTOLUENE
1287

ALPHA-PICOLINE
(SEE 2-METHYLPYRIDINE)

ALPHA-PROPYLNAPHTHALENE
(NO CITATIONS)

ALPHA-TERPINEOL
383

ALPHA,ALPHA-THIOXENE
(SEE DIMETHYL THIOPHENE)

AMINO BENZENE
(SEE ANILINE)

AMMONIA
27, 150, 162, 173, 177, 183, 232, 236
258, 309, 349, 352, 368, 427, 478, 692
724, 733, 738, 746, 761, 768, 769, 816
833, 880, 913, 922, 949, 1095, 1114
1131, 1165, 1199, 1218, 1264, 1303

AMMONIUM
(SEE AMMONIA)

AMYLBENZENE
(SEE PENTYL BENZENE)

ANILINE
72, 153, 154, 160, 192, 339, 404, 458
551, 552, 569, 622, 656, 716, 872, 873
929, 942, 951, 966, 967, 977, 987, 1181
1280, 1283

ANTHANTHRENE
(NO CITATIONS)

ANTHRACENE
58, 146, 293, 300, 457, 464, 467, 502
509, 510, 522, 742, 755, 783, 785, 914
967, 1017, 1051, 1052, 1053, 1054, 1080
1081, 1120, 1181

ANTHRAQUINONE DISULFONIC ACID
(NO CITATIONS)

ARBORANE
(NO CITATIONS)

AZABENZENE
(SEE PYRIDINE)

AZINE
(SEE PYRIDINE)

AZOLE
(SEE PYRROLE)

B(A)P
(SEE BENZO(A)PYRENE)

B(E)P
(SEE BENZO(E)PYRENE)

B(J)F
(SEE BENZO(J)FLUORANTHENE)

BAVERANE
(NO CITATIONS)

BENZ(A)ANTHRACENE
(SEE BENZO(A)ANTHRACENE)

BENZ(A)PHENANTHRENE
(SEE CHRYSENE)

BENZ(B)ANTHRACENE
(SEE NAPTHACENE)

BENZ(J)FLUORANTHENE
(SEE BENZO(J)FLUORANTHENE)

BENZALDEHYDE
239, 386, 860, 1244

BENZANTHRENE
(SEE BENZO(A)ANTHRACENE)

BENZENAMINE
(SEE ANILINE)

BENZENE
2, 12, 16, 37, 48, 60, 70, 90, 106
111, 113, 118, 141, 159, 161, 164, 168
205, 211, 221, 239, 252, 263, 272, 273
275, 278, 296, 330, 331, 340, 354, 367
385, 397, 409, 410, 413, 414, 415, 419
429, 462, 478, 482, 532, 551, 568, 571
584, 615, 642, 643, 645, 656, 658, 661
667, 668, 673, 690, 733, 744, 755, 765
767, 782, 783, 833, 836, 840, 863, 929
933, 940, 1017, 1051, 1052, 1059, 1130
1134, 1140, 1164, 1169, 1170, 1171
1177, 1178, 1181, 1185, 1244, 1260
1283, 1300

BENZIMIDAZOLE
1061

BENZO(A)ANTHRACENE
170, 300, 409, 421, 464, 467, 502, 503
509, 742, 783, 823

BENZO(A)PHENANTHRENE
(SEE BENZO(A)ANTHRACENE)

BENZO(A)PYRENE
17, 18, 19, 36, 86, 91, 107, 108, 148
185, 190, 241, 322, 324, 325, 326, 357
371, 398, 409, 421, 454, 464, 467, 474
475, 476, 502, 503, 509, 529, 550, 562
600, 606, 607, 669, 743, 744, 745, 750
763, 766, 776, 823, 896, 899, 913, 947
950, 951, 955, 957, 962, 964, 965, 967
997, 1038, 1051, 1069, 1070, 1072, 1073
1074, 1075, 1088, 1089, 1098, 1152
1273, 1285, 1296, 1301, 1309

BENZO(B)PHENANTHRENE
(SEE BENZO(A)ANTHRACENE)

BENZO(B)PYRIDINE
(SEE QUINOLINE)

BENZO(B)QUINOLINE
(SEE ACRIDINE)

BENZO(B)THIOPHENE
238, 533, 638, 1027

BENZO(C)CHRYSENE
(NO CITATIONS)

BENZO(C)PHENANTHRENE
(NO CITATIONS)

BENZO(DEF)PHENANTHRENE
(SEE PYRENE)

BENZO(E)PYRENE
464, 1051, 1052

BENZO(G)CHRYSENE
(NO CITATIONS)

BENZO(GHI)PERYLENE
464, 501, 502, 606, 607, 750

BENZO(J)FLUORANTHENE
464, 750, 1041

BENZO(JK)FLUORENE
(SEE FLUORANTHENE)

BENZO(K)FLUORANTHENE
464, 502

BENZO(MNO)FLUORANTHENE
(NO CITATIONS)

BENZODIAZOLE
(SEE BENZIMIDAZOLE)

BENZOFURAN
(NO CITATIONS)

BENZOFURANOL
(NO CITATIONS)

BENZOGLYOXALINE
(SEE BENZIMIDAZOLE)

BENZOIC ACID
258, 345, 470, 547, 647, 689, 709, 892
919, 951, 1000, 1001, 1113, 1219, 1220

BENZOIC ALDEHYDE
(SEE BENZALDEHYDE)

BENZONAPHTHOTHIOPHENE
(NO CITATIONS)

BENZONITRILE
296

BENZOSULFONAZOLE
(SEE BENZOTHIAZOLE)

BENZOTHIAZOLE
238, 358, 577, 1003

BENZOTHIOFURAN
(SEE BENZO(B)THIOPHENE)

BENZOTHIOPHENOL
(NO CITATIONS)

BENZYLBENZENE
(SEE ALPHA-PHENYLTOLUENE)

BETA-COLLIDINE
(NO CITATIONS)

BETA-METHYLNAPHTHALENE
(SEE 2-METHYLNAPHTHALENE)

BETA-METHYLSTYRENE
923

BETA-NAPHTHOHYDROQUINONE
(SEE 1,2-DIHYDROXYNAPHTHALENE)

BETA-NAPHTHOL
1160

BETA-PHENYLPROPYLENE
(SEE ALPHA-METHYLSTYRENE)

BETA-PROPYLNAPHTHALENE
(NO CITATIONS)

BIBENZENE
(SEE BIPHENYL)

BIETHYLENE
(SEE 1,3-BUTADIENE)

BIPHENOL
(NO CITATIONS)

BIPHENYL
13, 14, 15, 42, 152, 200, 201, 229
251, 293, 302, 336, 413, 416, 417, 467
492, 554, 643, 715, 775, 829, 839, 848
882, 919, 928, 995, 1214, 1287, 1299
1302

BIPHENYLENE
(NO CITATIONS)

BIS(BETA-CHLOROETHYL)ETHER
(SEE DI(2-CHLOROETHYL)ETHER)

BIS(2-CHLOROETHYL)ETHER
(SEE DI(2-CHLOROETHYL)ETHER)

BIS(2-ETHYLHEXYL)PHTHALATE
(SEE DI(2-ETHYLHEXYL)PHTHALATE)

BP
(SEE BENZO(A)PYRENE)

BROMOFORM
(NO CITATIONS)

BUCS
(SEE 2-BUTOXYETHANOL)

BUTALDEHYDE
(SEE N-BUTYRALDEHYDE)

BUTANAL
(SEE N-BUTYRALDEHYDE)

BUTANE
(SEE N-BUTANE)

BUTANECARBOXYLIC ACID
(SEE PENTANOIC ACID)

BUTENE
(NO CITATIONS)

BUTENYL ACETATE
(SEE ACETOXYBUTENE)

BUTOXYDIETHYLENE GLYCOL
(SEE 2-(2-BUTOXYETHOXY)ETHANOL)

BUTYL AMIDE
(NO CITATIONS)

BUTYL BENZENE
568

BUTYL CARBITOL
(SEE 2-(2-BUTOXYETHOXY)ETHANOL)

BUTYL DIETHYL AMINE
(NO CITATIONS)

BUTYL DIOXITOL
(SEE 2-(2-BUTOXYETHOXY)ETHANOL)

BUTYL GLYCOL
(SEE 2-BUTOXYETHANOL)

BUTYL PHENOL
(NO CITATIONS)

BUTYL PROPYL KETONE
(SEE 4-OCTANONE)

BUTYRAL
(SEE N-BUTYRALDEHYDE)

BUTYRONE
(SEE 4-HEPTANONE)

CAPROIC ALDEHYDE
(SEE HEXALDEHYDE)

CAPROYL ALCOHOL
(SEE HEXYL ALCOHOL)

CAPRYLIC ALCOHOL
(SEE OCTYL ALCOHOL)

CARBAZOLE
(NO CITATIONS)

CARBON BISULFIDE
(SEE CARBON DISULFIDE)

CARBON DICHLORIDE
(SEE 1,1,2,2-TETRACHLOROETHYLENE)

CARBON DISULFIDE
171, 1112

CARBON MONOXIDE
481

CARBON OXYSULFIDE
(SEE CARBONYL SULFIDE)

CARBONYL SULFIDE
(NO CITATIONS)

CATECHOL
72, 215, 216, 252, 278, 299, 308, 341
344, 386, 409, 410, 411, 413, 416, 504
547, 557, 572, 609, 696, 709, 711, 755
787, 788, 976, 993, 999, 1000, 1001
1011, 1032, 1037, 1066, 1162, 1199
1219, 1228, 1249, 1304

CETANE
(SEE HEXADECANE)

CHINALDINE
(SEE QUINALDINE)

CHINOLINE
(SEE QUINOLINE)

CHLOROBACTENE
(NO CITATIONS)

CHLORODIBROMOMETHANE
(NO CITATIONS)

CHLOROETHANE
52, 1105

CHLOROETHYLENE
(SEE VINYL CHLORIDE)

CHLOROFORM
133, 158, 210, 264, 301, 323, 337, 623
659, 822, 1229, 1300

CHLOROMETHYLOXIRANE
(SEE 1-CHLORO-2,3-EPOXYPROPANE)

CHLOROPROPYLENE OXIDE
(SEE 1-CHLORO-2,3-EPOXYPROPANE)

CHOLESTANE
(NO CITATIONS)

CHRYSENE
146, 464, 467

CIS-BETA-BUTYLENE
(SEE BUTENE)

CIS-BUTENEDIOIC ACID
(SEE MALEIC ACID)

CIS-BUTENEDIOIC ANHYDRIDE
(SEE MALEIC ANHYDRIDE)

CIS-DECENE
(SEE N-DECENE)

CIS-MUCONIC ACID
(SEE 2,4-HEXADIENEDIOIC ACID, CIS CIS)

CIS-9-OCTADECENOIC ACID
(NO CITATIONS)

CORONENE
607

CRESOL
9, 53, 76, 77, 78, 85, 163, 247, 313
314, 343, 439, 523, 527, 537, 658, 664
665, 733, 777, 849, 861, 867, 870, 884
929, 976, 1030, 1066, 1160, 1168, 1197
1199, 1239

CUMENE
(SEE ISOPROPYL BENZENE)

CYANIDE
6, 42, 43, 44, 45, 49, 56, 59, 69, 71
74, 75, 88, 89, 96, 98, 103, 116, 123
134, 135, 137, 150, 155, 165, 171, 184
191, 196, 199, 204, 217, 218, 220, 226
227, 236, 243, 253, 255, 258, 270, 305
307, 315, 318, 338, 349, 364, 368, 372
384, 387, 390, 394, 402, 405, 407, 440
448, 456, 459, 460, 468, 469, 483, 488
506, 515, 516, 517, 518, 524, 543, 559
566, 588, 591, 627, 637, 644, 686, 700
707, 733, 734, 735, 736, 737, 751, 754
768, 769, 770, 771, 810, 811, 812, 814
833, 859, 888, 891, 897, 900, 905, 931
932, 938, 939, 949, 988, 989, 1009
1018, 1019, 1022, 1044, 1059, 1084
1085, 1086, 1087, 1142, 1174, 1180
1193, 1211, 1212, 1213, 1218, 1220
1221, 1243, 1272, 1286, 1291, 1312
1313

CYANOBENZENE
(SEE BENZONITRILE)

CYANOETHYLENE
(SEE ACRYLONITRILE)

CYANOMETHANE
(SEE ACETONITRILE)

CYCLOBUTANOL
(NO CITATIONS)

CYCLOHEXANE
99, 260, 261, 275, 291, 312, 367, 443
462, 470, 581, 624, 1122, 1157, 1210
1253

CYCLOHEXANOL
70, 443, 624

CYCLOHEXANONE
727

CYCLOOCTATETRAENE
(NO CITATIONS)

DB(A,H)A
(SEE DIBENZO(A,H)ANTHRACENE)

DBA
(SEE 7,12-DIMETHYLBENZO(A)ANTHRACENE)

DECANE
145, 269, 275, 546, 646, 739, 764, 828
928, 1062, 1063, 1094, 1143

DECANOIC ACID
(NO CITATIONS)

DECYL BENZENE
(NO CITATIONS)

DELTA-CAPROLACTONE
(NO CITATIONS)

DI(2-CHLOROETHYL)ETHER
(NO CITATIONS)

DI(2-ETHYLHEXYL)ORTHOPHTHALATE
(SEE DI(2-ETHYLHEXYL)PHTHALATE)

DI(2-ETHYLHEXYL)PHTHALATE
890

DI-N-BUTOXYMETHANE
(NO CITATIONS)

DI-N-BUTYLPHTHALATE
522, 555, 1078, 1105

DI-N-PROPYL ETHER
(NO CITATIONS)

DI-S-BUTOXYMETHANE
(NO CITATIONS)

DI-S-OCTYLPHTHALATE
(SEE DI(2-ETHYLHEXYL)PHTHALATE)

DIBENZ(A,H)ANTHRACENE
(SEE DIBENZO(A,H)ANTHRACENE)

DIBENZ(A,J)ACRIDINE
(SEE DIBENZO(A,J)ACRIDINE)

DIBENZO(A,H)ANTHRACENE
464, 1098

DIBENZO(A,J)ACRIDINE
(NO CITATIONS)

DIBENZO(A,JK)FLUORENE
(SEE BENZO(J)FLUORANTHENE)

DIBENZO(B,D)PYRROLE
(SEE CARBAZOLE)

DIBENZO(B,E)PYRIDINE
(SEE ACRIDINE)

DIBENZO(CD,JK)PYRENE
(NO CITATIONS)

DIBENZO(CD,LM)PERYLENE
(NO CITATIONS)

DIBENZOFURAN
752

DIBENZOTHIOPHENE
416, 418, 626, 714

DICHLOROBROMOMETHANE
(NO CITATIONS)

DICHLOROETHYLENE
(SEE ETHYLENE DICHLORIDE)

DICHLOROMETHANE
(SEE METHYLENE CHLORIDE)

DIETHYL AMINE
495, 749, 1013, 1067

DIETHYL ETHER
167, 178, 210, 296, 438, 479, 623, 696
711, 977, 1046, 1060, 1134, 1147, 1244
1259, 1261

DIETHYLENE GLYCOL N-BUTYL ETHER
(SEE 2-(2-BUTOXYETHOXY)ETHANOL)

DIHYDRO-2(3H)-FURANONE
(NO CITATIONS)

DIHYDROOXIRENE
(SEE ETHYLENE OXIDE)

DIHYDROXY BENZENE
(NO CITATIONS)

DIMETHYL BENZANTHRENE
(SEE 7,12-DIMETHYLBENZO(A)ANTHRACENE)

DIMETHYL BENZENE
(SEE XYLENE)

DIMETHYL CYCLOPENTANONE
(NO CITATIONS)

DIMETHYL DISULPHIDE
(NO CITATIONS)

DIMETHYL ETHER
167

DIMETHYL FURAN
(NO CITATIONS)

DIMETHYL METHYL PYRIDINE
(NO CITATIONS)

DIMETHYL PHENOL
(SEE XYLENOL)

DIMETHYL PYRIDINE
1096

DIMETHYL PYRROLE
(NO CITATIONS)

DIMETHYL SULFIDE
(NO CITATIONS)

DIMETHYL THIOPHENE
(NO CITATIONS)

DIPHENYL
(SEE BIPHENYL)

DIPHENYL ANILINE
(NO CITATIONS)

DIPHENYL METHANE
(SEE ALPHA-PHENYLTOLUENE)

DIPHENYL SULFIDE
(NO CITATIONS)

DIPHENYLENE OXIDE
(SEE DIBENZOFURAN)

DIPHENYLENEIMINE
(SEE CARBAZOLE)

DIPROPYL KETONE
(SEE 4-HEPTANONE)

DITHIOCARBONIC ANHYDRIDE
(SEE CARBON DISULFIDE)

DIVINYLENIMINE
(SEE PYRROLE)

DMA
(SEE DIETHYL AMINE)

DMBA
(SEE 7,12-DIMETHYLBENZO(A)ANTHRACENE)

DMS
(SEE DIMETHYL SULFIDE)

DODECANE
73, 180, 1037

DODECENE
(NO CITATIONS)

DURENE
(SEE TETRAMETHYL BENZENE)

EAK
(SEE 5-METHYL-3-HEPTANONE)

EB
(SEE ETHYL BENZENE)

EICOSANE
(NO CITATIONS)

ENANTHIC ACID
(SEE HEPTANOIC ACID)

ENANTHYLIC ACID
(SEE HEPTANOIC ACID)

EPICHLOROHYDRIN
(SEE 1-CHLORO-2,3-EPOXYPROPANE)

ERGOSTANE
(NO CITATIONS)

ETHANAL
(SEE ACETALDEHYDE)

ETHANAMIDE
(SEE ACETAMIDE)

ETHANE
718, 1105, 1244

ETHANECARBOXYLIC ACID
(SEE PROPIONIC ACID)

ETHANENITRILE
(SEE ACETONITRILE)

ETHANOIC ACID
(SEE ACETIC ACID)

ETHANOL
(SEE ETHYL ALCOHOL)

ETHENE
(SEE ETHYLENE)

ETHER
(SEE DIETHYL ETHER)

ETHOXY ETHANE
(SEE DIETHYL ETHER)

ETHYL ALCOHOL
178, 202, 225, 264, 327, 328, 329, 470
484, 746, 817, 1182, 1199, 1300, 1306

ETHYL ALDEHYDE
(SEE ACETALDEHYDE)

ETHYL AMYL KETONE
(SEE 5-METHYL-3-HEPTANONE)

ETHYL ANILINE
(NO CITATIONS)

ETHYL BENZENE
67, 111, 239, 412, 413, 414, 465, 836
852, 863, 1118, 1130

ETHYL CHLORIDE
(SEE CHLOROETHANE)

ETHYL DIMETHYL AMINE
(SEE T-BUTYL AMINE)

ETHYL ETHER
(SEE DIETHYL ETHER)

ETHYL NAPHTHALENE
(NO CITATIONS)

ETHYL PENTYL KETONE
(SEE 3-OCTANONE)

ETHYL PHENOL
314, 660, 666

ETHYL PROPYL KETONE
(SEE 3-HEXANONE)

ETHYL PYRAZINE
(NO CITATIONS)

ETHYL PYRIDINE
(NO CITATIONS)

ETHYL PYRROLE
(NO CITATIONS)

ETHYL THIOPHENE
(NO CITATIONS)

ETHYLENE
23, 48, 50, 206, 228, 287, 288, 289
290, 296, 333, 450, 451, 486, 514, 583
667, 708, 718, 1029, 1078, 1118, 1165
1265, 1274, 1275, 1307

ETHYLENE DICHLORIDE
(NO CITATIONS)

ETHYLENE GLYCOL
70, 228, 296, 410, 450, 451, 486, 519
564, 583, 599, 667, 708, 827, 916, 929
1029, 1118, 1265, 1267, 1299, 1307

ETHYLENE OXIDE
583, 589, 590

ETHYLENE TETRACHLORIDE
(SEE 1,1,2,2-TETRACHLOROETHYLENE)

ETHYNE
282, 287, 493

FERNANE
(NO CITATIONS)

FILICANE
(NO CITATIONS)

FLUOANTHRENE
(SEE FLUORANTHENE)

FLUORANTHENE
41, 91, 455, 464, 502, 522, 750, 981
1051, 1052, 1054

FLUORENE
36, 91, 293, 457, 467, 739, 742, 744

FORMALDEHYDE
10, 104, 127, 130, 132, 197, 222, 333
355, 356, 369, 388, 450, 451, 452, 495
496, 684, 691, 760, 789, 885, 894, 910
911, 959, 975, 1024, 1049, 1113, 1121
1156, 1206, 1215, 1234, 1268, 1269

FORMALIN
(SEE FORMALDEHYDE)

FORMIC ACID
432, 433, 815, 1113

FRIEDELANE
(NO CITATIONS)

FUBRIDAZOLE
(SEE 2-METHYLBENZIMIDAZOLE)

FURAN
980, 1186

FURIDAZOLE
(SEE 2-METHYLBENZIMIDAZOLE)

GAMMA-BUTYROLACTONE
(SEE DIHYDRO-2(3H)-FURANONE)

GAMMA-CAPROLACTONE
(NO CITATIONS)

GAMMA-CERANE
(NO CITATIONS)

GAMMA-COLLIDINE
(SEE 2,4,6-TRIMETHYLPYRIDINE)

GAMMA-LACTONE
(SEE DIHYDRO-2(3H)-FURANONE)

GAMMA-PICOLINE
(SEE 4-METHYLPYRIDINE)

GAMMA-VALEROLACTONE
821

GLYCERINE
(SEE GLYCEROL)

GLYCEROL
8, 219, 1115, 1306

GLYCOL
(SEE ETHYLENE GLYCOL)

GUAIENE
(SEE 2,3-DIMETHYLNAPHTHALENE)

HENEICOSANE
314

HEPTADECANE
744, 804, 1043

HEPTADECENE
(NO CITATIONS)

HEPTANOIC ACID
536

HEPTENE
(NO CITATIONS)

HEPTYL BENZENE
(NO CITATIONS)

HEPTYLENE
(SEE HEPTENE)

HEXABENZOBENZENE
(SEE CORONENE)

HEXADECANE
114, 311, 546, 744, 791, 1048, 1055
1064, 1253, 1258

HEXAFLUOROBENZENE
(NO CITATIONS)

HEXALDEHYDE
(NO CITATIONS)

HEXANAL
(SEE HEXALDEHYDE)

HEXENE
(NO CITATIONS)

HEXONE
(SEE 2-METHYL-4-PENTANONE)

HEXYL ALCOHOL
(NO CITATIONS)

HEXYL BENZENE
275

HOPANE
82, 348

HYDRINDONAPHTHENE
(SEE INDANE)

HYDROGEN CYANIDE
(SEE CYANIDE)

HYDROQUINONE
609, 657, 671, 787, 788, 861, 1066
1077, 1160, 1305, 1306

HYDROXY BENZALDEHYDE
386

HYDROXY BENZENE
(SEE PHENOL)

HYDROXY BENZOFURAN
(NO CITATIONS)

HYDROXY BENZOTHIOPHENOL
(NO CITATIONS)

HYDROXY PROPYL BENZENE
(SEE ISOPROPYL PHENOL)

HYPNONE
(SEE ACETOPHENONE)

IDRYL
(SEE FLUORANTHENE)

INDAN
(SEE INDANE)

INDANE
(NO CITATIONS)

INDANOL
(NO CITATIONS)

INDENE
(NO CITATIONS)

INDOL
(SEE INDOLE)

INDOLE
1022, 1058, 1184

INDONAPHTHENE
(SEE INDENE)

IPA
(SEE ISOPROPYL ALCOHOL)

ISOBUTYL BENZENE
927

ISOBUTYL NITRILE
(NO CITATIONS)

ISOBUTYL PHENOL
(NO CITATIONS)

ISOCHINOLINE
(NO CITATIONS)

ISOOCTYL ALCOHOL
(NO CITATIONS)

ISOPENTYL BENZENE
(NO CITATIONS)

ISOPROPANOL
(SEE ISOPROPYL ALCOHOL)

ISOPROPENYL BENZENE
(SEE ALPHA-METHYLSTYRENE)

ISOPROPYL ALCOHOL
178, 264, 399, 467, 470, 503, 667, 755

ISOPROPYL BENZENE
141, 142, 430, 776, 925, 926, 927
1130, 1254

ISOPROPYL NAPHTHALENE
(NO CITATIONS)

ISOPROPYL PHENOL
238, 350, 1238

ISOPROPYL THIOPHENE
(NO CITATIONS)

ISOQUINOLINE
(NO CITATIONS)

KETOLE
(SEE INDOLE)

LEPIDINE
(SEE 4-METHYLQUINOLINE)

LUPANE
(NO CITATIONS)

LUTIDINE
(SEE DIMETHYL PYRIDINE)

M-CRESOL
439, 527

M-ETHYLTOLUENE
(NO CITATIONS)

M-HYDROXYPHENOL
(SEE RESORCINOL)

M-METHOXYBENZALDEHYDE
(NO CITATIONS)

M-METHOXYINDOLE
(NO CITATIONS)

M-METHYLPHENOL
(SEE M-CRESOL)

M-TOLUIDINE
(NO CITATIONS)

M-XYLENE
411, 416, 482

MALEIC ACID
424

MALEIC ANHYDRIDE
261

MBK
(SEE 2-HEXANONE)

MCA
(SEE 3-METHYLCHOLANTHRENE)

MESITYLENE
161, 223, 482

METHANAL
(SEE FORMALDEHYDE)

METHANE
354, 365, 408, 504, 521, 544, 623, 695
699, 706, 718, 755, 781, 832, 968, 1007
1008, 1012, 1141, 1266, 1287

METHANOIC ACID
(SEE FORMIC ACID)

METHOXY BENZALDEHYDE
(NO CITATIONS)

METHOXY METHANE
(SEE DIMETHYL ETHER)

METHYL ACETIC ACID
(SEE PROPIONIC ACID)

METHYL ANILINE
966

METHYL BENZENE
(SEE TOLUENE)

METHYL BIPHENYL
(NO CITATIONS)

METHYL CYANOBENZENE
(NO CITATIONS)

METHYL CYCLOHEXANONE
(NO CITATIONS)

METHYL CYCLOPENTANE
(NO CITATIONS)

METHYL DIHYDRONAPHTHALENE
(NO CITATIONS)

METHYL ETHENE
(SEE PROPENE)

METHYL ETHYL BENZENE
(NO CITATIONS)

METHYL ETHYL NAPHTHALENE
(NO CITATIONS)

METHYL ETHYL PHENOL
(NO CITATIONS)

METHYL ETHYL PYRIDINE
(NO CITATIONS)

METHYL ETHYLENE
(SEE PROPENE)

METHYL HEXYL KETONE
(SEE 2-OCTANONE)

METHYL INDENE
(NO CITATIONS)

METHYL INDOL
(SEE METHYL INDOLE)

METHYL INDOLE
(NO CITATIONS)

METHYL ISOAMYL KETONE
(SEE 2-METHYL-5-HEXANONE)

METHYL ISOBUTYL KETONE
(SEE 2-METHYL-4-PENTANONE)

METHYL ISOPROPYL AMINE
(NO CITATIONS)

METHYL MERCAPTAN
292, 499

METHYL N-AMYL KETONE
(SEE 2-HEPTANONE)

METHYL N-BUTYL KETONE
(SEE 2-HEXANONE)

METHYL NAPHTHOL
(NO CITATIONS)

METHYL OXIRAN
(SEE PROPYLENE OXIDE)

METHYL OXIRANE
(SEE PROPYLENE OXIDE)

METHYL PENTYL KETONE
(SEE 2-HEPTANONE)

METHYL PHENYL KETONE
(SEE ACETOPHENONE)

METHYL PYRIDINE
(NO CITATIONS)

METHYL PYROCATECHOL
(NO CITATIONS)

METHYL QUINOLINE
(NO CITATIONS)

METHYL STYRENE
558, 923, 927, 1105

METHYL T-BUTYL KETONE
(NO CITATIONS)

METHYL THIOPHENE
(NO CITATIONS)

METHYLENE CHLORIDE
213, 1045

MIAK
(SEE 2-METHYL-5-HEXANONE)

MIK
(SEE 2-METHYL-4-PENTANONE)

MONOBUTYL ETHER
(SEE 2-BUTOXYETHANOL)

MONOCHLOROETHYLENE
(SEE VINYL CHLORIDE)

MONOTHIOL TRIETHYLENE GLYCOL
(NO CITATIONS)

MORETANE
(NO CITATIONS)

MULTIFLORANE
(NO CITATIONS)

N-BUTANE
73, 167, 397, 555, 602, 836, 1147
1162

N-BUTANOL
(SEE N-BUTYL ALCOHOL)

N-BUTYL ALCOHOL
170, 470, 484, 530, 869, 954

N-BUTYL ALDEHYDE
(SEE N-BUTYRALDEHYDE)

N-BUTYL ETHYL KETONE
(SEE 3-HEPTANONE)

N-BUTYL VINYL ETHER
(NO CITATIONS)

N-BUTYRALDEHYDE
552

N-CAPRIC ACID
(SEE DECANOIC ACID)

N-CAPROIC ACID

(SEE N-HEXANOIC ACID)

N-CAPRYLIC ACID
(SEE OCTANOIC ACID)

N-DECANOL
(SEE N-DECYL ALCOHOL)

N-DECENE
(NO CITATIONS)

N-DECOIC ACID
(SEE DECANOIC ACID)

N-DECYL ALCOHOL
(NO CITATIONS)

N-DECYLIC ACID
(SEE DECANOIC ACID)

N-ETHYL ANILINE
(NO CITATIONS)

N-HEPTANE
73, 101, 535, 536

N-HEPTOIC ACID
(SEE HEPTANOIC ACID)

N-HEXADECOIC ACID
(SEE PALMITIC ACID)

N-HEXANE
179, 275, 298, 312, 426, 462, 1166

N-HEXANOIC ACID
(NO CITATIONS)

N-HEXANOL
(SEE HEXYL ALCOHOL)

N-HEXOIC ACID
(SEE N-HEXANOIC ACID)

N-METHYLMORPHOLINE
(NO CITATIONS)

N-NITROSO-1,1-DIMETHYL-3-ETHYLUREA
(NO CITATIONS)

N-NONOIC ACID
(SEE NONANOIC ACID)

N-NONYLIC ACID
(SEE NONANOIC ACID)

N-OCTANOL
(SEE OCTYL ALCOHOL)

N-PENTADECANE
(NO CITATIONS)

N-PROPYL ALCOHOL
(NO CITATIONS)

N-PROPYL AMINE
140, 209

N-PROPYL BENZENE
(NO CITATIONS)

N-VALERIC ACID
(SEE PENTANOIC ACID)

N,N-DIMETHYLNAPTHYLAMINE
(NO CITATIONS)

NAPHTHALENE
2, 4, 39, 66, 91, 112, 105, 194, 202
207, 223, 275, 293, 299, 311, 336, 359
409, 413, 414, 415, 467, 477, 500, 509
522, 540, 567, 596, 712, 713, 714, 733
739, 740, 741, 742, 743, 744, 752, 755
762, 800, 866, 871, 895, 958, 994, 1011
1016, 1017, 1034, 1051, 1052, 1053
1054, 1095, 1111, 1116, 1135, 1136
1137, 1138, 1148, 1205, 1230, 1244
1249, 1253, 1254, 1283, 1287

NAPHTHANTHRACENE
(SEE BENZO(A)ANTHRACENE)

NAPTHACENE
(NO CITATIONS)

NEOMOTIONE
(NO CITATIONS)

NONADECANE
(NO CITATIONS)

NONANE
465, 1037, 1287

NONANOIC ACID
(NO CITATIONS)

NONENE
(NO CITATIONS)

O-AMINOTOLUENE
(SEE O-TOLUIDINE)

O-BENZENEDIOL
(SEE CATECHOL)

O-BUTYLDIETHYLENE GLYCOL
(SEE 2-(2-BUTOXYETHOXY)ETHANOL)

O-CRESOL
439, 665, 867, 870

O-DIHYDROXYBENZENE
(SEE CATECHOL)

O-ETHYLANILINE
(NO CITATIONS)

O-ETHYLPHENOL
(NO CITATIONS)

O-ETHYLTOLUENE
(NO CITATIONS)

O-HYDROXYPHENOL
(SEE CATECHOL)

O-HYDROXYTOLUENE
(SEE O-CRESOL)

O-ISOPROPYLPHENOL
(NO CITATIONS)

O-METHYLPHENOL
(SEE O-CRESOL)

O-METHYLSTYRENE
(NO CITATIONS)

O-QUINONE
(SEE 1,2-BENZOQUINONE)

O-TOLUIDINE
966

O-TOLUQUINOLINE
(SEE 8-METHYLQUINOLINE)

O-XYLENE
416, 417, 418, 482, 970

OCTADECANE
283, 744

OCTALDEHYDE
(NO CITATIONS)

OCTANE
465, 473, 563

OCTANOIC ACID
(NO CITATIONS)

OCTENE
(NO CITATIONS)

OCTYL ALCOHOL
385

OCTYL BENZENE
(NO CITATIONS)

OLEANANE
(NO CITATIONS)

OLEIC ACID
(SEE CIS-9-OCTADECENOIC ACID)

OXIRAN
(SEE ETHYLENE OXIDE)

OXIRANE
(SEE ETHYLENE OXIDE)

OXYALLOSETUL-2-ENE
(NO CITATIONS)

P-BENZOQUINONE
(SEE 1,4-BENZOQUINONE)

P-CAROTANE
(NO CITATIONS)

P-CRESOL
78, 244, 350, 664

P-DIHYDROXYBENZENE
(SEE HYDROQUINONE)

P-ETHYLANILINE
(NO CITATIONS)

P-ETHYLPHENOL
666

P-ETHYLTOLUENE
(NO CITATIONS)

P-HYDROXYTOLUENE
(SEE P-CRESOL)

P-ISOPROPYLPHENOL
(NO CITATIONS)

P-METHYLPHENOL
(SEE P-CRESOL)

P-QUINONE
(SEE 1,4-BENZOQUINONE)

P-XYLENE
416, 418

PALMITIC ACID
114

PARAFFIN
99, 100, 110, 131, 147, 198, 208, 242
245, 246, 505, 596, 646, 845, 875, 876
877, 883, 917, 922, 1033, 1132

PARAFORMALDEHYDE
(SEE 1,3,5-TRIOXANE)

PENTADECENE
(NO CITATIONS)

PENTANE
73, 1175

PENTANOIC ACID
470, 954

PENTYL BENZENE
(NO CITATIONS)

PENTYL PHENOL
(NO CITATIONS)

PERCHLOROETHYLENE
(SEE 1,1,2,2-TETRACHLOROETHYLENE)

PERFLUOROTOLUENE
(NO CITATIONS)

PEROPYRENE
(SEE DIBENZO(CD,LM)PERYLENE)

PERYLENE
502, 607, 899, 1251, 1254

PHENANTHRENE
223, 293, 336, 467, 503, 512, 522, 582
755, 928, 981, 1053, 1098, 1254

PHENANTHRIDINE
(NO CITATIONS)

PHENANTHROL
(NO CITATIONS)

PHENOL
5, 24, 25, 26, 27, 28, 34, 35, 38, 40
47, 55, 62, 63, 64, 77, 79, 80, 81, 83
97, 102, 103, 117, 122, 125, 128, 129
133, 138, 149, 157, 169, 172, 173, 174
177, 182, 184, 192, 194, 195, 203, 213
224, 232, 233, 234, 236, 240, 248, 253
257, 259, 263, 267, 268, 271, 279, 295
297, 303, 304, 307, 308, 313, 314, 317
318, 321, 332, 337, 343, 344, 349, 350
351, 364, 366, 369, 370, 373, 374, 375
376, 377, 378, 379, 382, 390, 391, 392
393, 396, 400, 405, 406, 422, 423, 434
435, 436, 437, 439, 446, 447, 453, 461
463, 469, 470, 473, 476, 478, 479, 485
487, 489, 504, 519, 525, 526, 528, 539
551, 556, 559, 561, 574, 575, 576, 579
580, 585, 587, 589, 590, 592, 593, 594
595, 608, 610, 611, 616, 617, 618, 619
620, 621, 625, 629, 630, 631, 632, 633
634, 649, 651, 658, 660, 662, 663, 664
670, 678, 679, 680, 681, 682, 683, 685
687, 688, 689, 691, 693, 694, 695, 696
698, 701, 710, 711, 721, 722, 723, 724
725, 731, 732, 733, 738, 748, 758, 761
772, 773, 774, 776, 777, 778, 779, 782
784, 786, 787, 788, 793, 795, 805, 806
807, 808, 809, 813, 820, 822, 824, 831
833, 835, 838, 841, 842, 843, 844, 847
848, 852, 854, 856, 881, 900, 901, 902
903, 904, 906, 908, 912, 933, 934, 941
942, 943, 944, 945, 946, 952, 953, 960
961, 973, 974, 979, 982, 983, 984, 985
986, 990, 991, 996, 1002, 1004, 1005
1006, 1010, 1014, 1020, 1021, 1023
1026, 1030, 1031, 1035, 1036, 1046
1047, 1050, 1057, 1058, 1059, 1060
1065, 1066, 1068, 1079, 1080, 1081
1082, 1083, 1090, 1091, 1092, 1093
1097, 1106, 1109, 1110, 1125, 1131
1133, 1134, 1139, 1140, 1144, 1145
1146, 1147, 1153, 1154, 1155, 1156
1159, 1160, 1164, 1166, 1167, 1183
1187, 1189, 1190, 1192, 1194, 1196
1198, 1202, 1204, 1213, 1216, 1218
1222, 1225, 1226, 1227, 1231, 1232
1234, 1236, 1237, 1238, 1240, 1242
1244, 1245, 1246, 1276, 1277, 1288
1289, 1294, 1295, 1297, 1304, 1310
1311, 1313

PHENOLIC RESINS
1215

PHENYL AMINE
(SEE ANILINE)

PHENYL BENZENE
(SEE BIPHENYL)

PHENYL CYANIDE
(SEE BENZONITRILE)

PHENYL ETHANE
(SEE ETHYL BENZENE)

PHENYL NAPHTHALENE
(NO CITATIONS)

PHTHALIC ANHYDRIDE
11, 214, 345, 346, 424, 470, 479, 521
565, 639, 640, 641, 802, 818, 837, 862
890, 956, 1000, 1223

PICENE
(NO CITATIONS)

PINACOLIN
(SEE METHYL T-BUTYL KETONE)

PINACOLINE
(SEE METHYL T-BUTYL KETONE)

PINACOLONE
(SEE METHYL T-BUTYL KETONE)

POLYETHYLENE
61, 250, 730, 796, 916, 1270, 1271
1299

POLYPROPYLENE
599, 1267

PROPANAMIDE
(SEE PROPIONAMIDE)

PROPANE
139, 140, 206, 718, 1078, 1116

PROPANOIC ACID
(SEE PROPIONIC ACID)

PROPANOL
(SEE ISOPROPYL ALCOHOL)

PROPENE
1, 48, 206, 266, 718, 794, 1267

PROPENENITRILE
(SEE ACRYLONITRILE)

PROPIONAMIDE
470

PROPIONIC ACID
144, 266, 484, 803

PROPIONIC ACID AMIDE
(SEE PROPIONAMIDE)

PROPYL ACETIC ACID
(SEE PENTANOIC ACID)

PROPYL BENZENE
142, 296

PROPYL HYDROGEN SULFATE
(NO CITATIONS)

PROPYLENE
(SEE PROPENE)

PROPYLENE CHLOROHYDRIN
(NO CITATIONS)

PROPYLENE DICHLORIDE
(SEE 1,2-DICHLOROPROPANE)

PROPYLENE OXIDE
1, 266, 794

PSEUDOCUMENE
(SEE 1,2,4-TRIMETHYLBENZENE)

PSEUDOCUMENOL
(SEE TRIMETHYL PHENOL)

PYRENE
16, 18, 36, 185, 300, 324, 457, 464
467, 494, 501, 502, 503, 522, 549, 562
607, 739, 740, 763, 846, 851, 898, 951
955, 962, 963, 966, 967, 1039, 1040
1051, 1052, 1053, 1054, 1069, 1070
1071, 1072, 1150, 1152, 1172, 1173
1250, 1254, 1273, 1285, 1296

PYRIDINE
46, 68, 87, 124, 157, 168, 183, 188
258, 284, 310, 347, 357, 517, 534, 553
614, 650, 675, 676, 692, 865, 907, 1095
1096, 1112, 1116, 1166, 1217, 1262
1263, 1264

PYROCATECHOL
(SEE CATECHOL)

PYROCATECHUIC ACID
(SEE CATECHOL)

PYRROL
(SEE PYRROLE)

PYRROLE
(NO CITATIONS)

QUINALDINE
32, 33, 537, 799

QUINOL
(SEE HYDROQUINONE)

QUINOLINE
9, 87, 449, 508, 553, 783, 955, 1011
1128

RESORCINOL
34, 101, 215, 216, 281, 308, 403, 508
557, 572, 609, 696, 711, 753, 861, 868
920, 1066, 1076, 1162, 1197, 1199, 1241

S-BUTANOL
(SEE S-BUTYL ALCOHOL)

S-BUTYL ALCOHOL
470

SAPOTALIN
(SEE TRIMETHYL NAPHTHALENE)

SERRATANE
(NO CITATIONS)

SITOSTANE
(NO CITATIONS)

STYRENE

1, 67, 186, 231, 239, 333, 531, 794
836, 852, 923, 935, 936, 972, 1100
1101, 1102, 1105, 1130, 1298

T-BUTANOL
(SEE T-BUTYL ALCOHOL)

T-BUTYL ALCOHOL
(NO CITATIONS)

T-BUTYL AMINE
653, 1314

TAR ACIDS
1207

TARAXASTANE
(NO CITATIONS)

TARAXERANE
(NO CITATIONS)

TETRACENE
(SEE NAPTHACENE)

TETRACHLOROETHYLENE
(SEE 1,1,2,2-TETRACHLOROETHYLENE)

TETRADECANE
31, 855

TETRADECENE
31

TETRADECYLENE
(SEE TETRADECENE)

TETRAHYMANE
(NO CITATIONS)

TETRAHYMANOL
(NO CITATIONS)

TETRAMETHYL BENZENE
(NO CITATIONS)

TETRAMETHYL INDAN
(SEE TETRAMETHYL INDANE)

TETRAMETHYL INDANE
(NO CITATIONS)

TETRAMETHYL UREA
(NO CITATIONS)

TETRAPHENE
(SEE BENZO(A)ANTHRACENE)

THIACYCLOPENTANE
(NO CITATIONS)

THIANAPHTHENE
(SEE BENZO(B)THIOPHENE)

THIONAPHTHENE
(SEE BENZO(B)THIOPHENE)

THIOPHENE
211, 416, 417, 418, 714, 833, 914
1027

THIOSULFIDE
(NO CITATIONS)

TMB
(SEE MESITYLENE)

TOLUENE
48, 66, 111, 118, 161, 163, 170, 188
211, 239, 330, 352, 367, 381, 409, 410
413, 414, 415, 420, 465, 482, 532, 548
628, 645, 673, 744, 755, 833, 874, 909
914, 915, 918, 1012, 1105, 1112, 1116
1130, 1181, 1244, 1253, 1300

TRANS-BETA-BUTYLENE
(SEE BUTENE)

TRANS-DECENE
(SEE N-DECENE)

TRANS-MUCONIC ACID
(SEE 2,4-HEXADIENEDIOIC ACID, TRANS TRANS

TRI-O-CRESYL PHOSPHATE
(SEE TRICRESYL PHOSPHATE)

TRI-O-TOLYL PHOSPHATE
(SEE TRICRESYL PHOSPHATE)

TRI-2-TOLYL PHOSPHATE
(SEE TRICRESYL PHOSPHATE)

TRIBROMOMETHANE
(SEE BROMOFORM)

TRICHLOROFLUOROMETHANE
(NO CITATIONS)

TRICHLOROMETHANE
(SEE CHLOROFORM)

TRICRESYL PHOSPHATE
(NO CITATIONS)

TRIDECANE
(NO CITATIONS)

TRIDECENE
(NO CITATIONS)

TRIDECYLENE

(SEE TRIDECENE)

TRIFORMOL
(SEE 1,3,5-TRIOXANE)

TRIMETHYL AMINO METHANE
(SEE T-BUTYL AMINE)

TRIMETHYL ANILINE
(NO CITATIONS)

TRIMETHYL INDAN
(SEE TRIMETHYL INDANE)

TRIMETHYL INDANE
(NO CITATIONS)

TRIMETHYL NAPHTHALENE
(NO CITATIONS)

TRIMETHYL PHENOL
(NO CITATIONS)

TRIMETHYL PYRIDINE
(NO CITATIONS)

TRIMETHYL SILANOL
(NO CITATIONS)

TRIOXYMETHYLENE
(SEE 1,3,5-TRIOXANE)

TRIPHENYLENE
(NO CITATIONS)

TRITOLYL PHOSPHATE
(SEE TRICRESYL PHOSPHATE)

UNDECANE
(SEE UNODECANE)

UNODECANE
(NO CITATIONS)

URSANE
(NO CITATIONS)

VINYL BENZENE
(SEE STYRENE)

VINYL CHLORIDE
145, 262, 766

VINYL CYANIDE
(SEE ACRYLONITRILE)

VINYL ETHYLENE
(SEE 1,3-BUTADIENE)

VINYL THIOPHENE
(NO CITATIONS)

VINYL TOLUENE
(SEE METHYL STYRENE)

XYLENE
67, 76, 111, 118, 161, 214, 275, 280
330, 367, 380, 411, 416, 417, 418, 465
482, 527, 542, 645, 673, 692, 833, 874
909, 924, 925, 926, 970, 1116, 1123
1126, 1256

XYLENOL
76, 314, 439, 660, 884, 1123, 1200
1240, 1267, 1305, 1306

1-AZA-2,4-CYCLOPENTADIENE
(SEE PYRROLE)

1-AZAINDENE
(SEE INDOLE)

1-AZANAPHTHALENE
(SEE QUINOLINE)

1-BENZAZINE
(SEE QUINOLINE)

1-BENZAZOLE
(SEE INDOLE)

1-BENZINE
(SEE QUINOLINE)

1-BENZOTHIOPHENE
(SEE BENZO(B)THIOPHENE)

1-BUTANOL
(SEE N-BUTYL ALCOHOL)

1-CHLORO-2-(BETA-CHLOROETHOXY)ETHANE
(SEE DI(2-CHLOROETHYL)ETHER)

1-CHLORO-2-PROPENE
(NO CITATIONS)

1-CHLORO-2,3-EPOXYPROPANE
(NO CITATIONS)

1-DECANOL
(SEE N-DECYL ALCOHOL)

1-DECENE
(SEE N-DECENE)

1-HEPTANE CARBOXYLIC ACID
(SEE OCTANOIC ACID)

1-HEXANAL
(SEE HEXALDEHYDE)

1-HEXANECARBOXYLIC ACID

(SEE HEPTANOIC ACID)

1-HEXANOL
(SEE HEXYL ALCOHOL)

1-HYDROXY-2,3-DIMETHYLBENZENE
(SEE 2,3-XYLENOL)

1-HYDROXY-2,4-DIMETHYLBENZENE
(SEE 2,4-XYLENOL)

1-HYDROXY-2,5-DIMETHYLBENZENE
(SEE 2,5-XYLENOL)

1-HYDROXY-2,6-DIMETHYLBENZENE
(SEE 2,6-XYLENOL)

1-HYDROXY-3,4-DIMETHYLBENZENE
(SEE 3,4-XLYENOL)

1-HYDROXY-3,5-DIMETHYLBENZENE
(SEE 3,5-XYLENOL)

1-HYDROXYNAPHTHALENE
(SEE ALPHA-NAPHTHOL)

1-METHYLFLOURENE
(NO CITATIONS)

1-METHYLINDENE
(NO CITATIONS)

1-METHYLNAPHTHALENE
1053

1-METHYLPHENANTHRENE
(NO CITATIONS)

1-METHYLPYRENE
(NO CITATIONS)

1-NAPHTHOL
(SEE ALPHA-NAPHTHOL)

1-NONANECARBOXYLIC ACID
(SEE DECANOIC ACID)

1-OCTANECARBOXYLIC ACID
(SEE NONANOIC ACID)

1-OCTANOL
(SEE OCTYL ALCOHOL)

1-PHENYLHEXANE
(SEE HEXYL BENZENE)

1-PHENYLNAPHTHALENE
(NO CITATIONS)

1-PROPANOL
(SEE N-PROPYL ALCOHOL)

1-THIA-3-AZAINDENE
(SEE BENZOTHIAZOLE)

1-THIAINDENE
(SEE BENZO(B)THIOPHENE)

1,1-DICHLORO-2,2-DICHLOROETHANE
(SEE 1,1,2,2-TETRACHLOROETHANE)

1,1-DIMETHYL ETHANOL
(SEE T-BUTYL ALCOHOL)

1,1,1-TRICHLOROETHENE
(NO CITATIONS)

1,1,2,2-TETRACHLOROETHANE
(NO CITATIONS)

1,1,2,2-TETRACHLOROETHYLENE
(NO CITATIONS)

1,1'-OXYBIS(2-CHLOROETHANE)
(SEE DI(2-CHLOROETHYL)ETHER)

1,2-(1,8-NAPHTHYLENE)BENZENE
(SEE FLUORANTHENE)

1,2-BENZACENAPHTHENE
(SEE FLUORANTHENE)

1,2-BENZANTHRACENE
(SEE BENZO(A)ANTHRACENE)

1,2-BENZENEDICARBOXYLIC ACID ANHYDRIDE
(SEE PHTHALIC ANHYDRIDE)

1,2-BENZENEDIOL
(SEE CATECHOL)

1,2-BENZOFLUORENE
(NO CITATIONS)

1,2-BENZOPHENANTHRENE
(SEE CHRYSENE)

1,2-BENZOPYRENE
(SEE BENZO(A)PYRENE)

1,2-BENZOQUINONE
978, 1077, 1199

1,2-BENZPHENANTHRENE
(SEE CHRYSENE)

1,2-BENZPYRENE
(SEE BENZO(A)PYRENE)

1,2-BUTANOLIDE
(SEE DIHYDRO-2(3H)-FURANONE)

1,2-DICHLOROETHANE
(SEE ETHYLENE DICHLORIDE)

1,2-DICHLOROPROPANE
(NO CITATIONS)

1,2-DIHYDROXYBENZENE
(SEE CATECHOL)

1,2-DIHYDROXYETHANE
(SEE ETHYLENE GLYCOL)

1,2-DIHYDROXYNAPHTHALENE
(NO CITATIONS)

1,2-DIMETHYLBENZENE
(SEE O-XYLENE)

1,2-DIMETHYLCYCLOPENTANONE
(SEE DIMETHYL CYCLOPENTANONE)

1,2-DIMETHYLNAPHTHALENE
(NO CITATIONS)

1,2-EPOXYETHANE
(SEE ETHYLENE OXIDE)

1,2-EPOXYPROPANE
(SEE PROPYLENE OXIDE)

1,2-ETHANEDIOL
(SEE ETHYLENE GLYCOL)

1,2-HYDRINDENE
(SEE INDANE)

1,2-NAPHTHALENEDIOL
(SEE 1,2-DIHYDROXYNAPHTHALENE)

1,2-PROPYLENEOXIDE
(SEE PROPYLENE OXIDE)

1,2,3-PROPANETRIOL
(SEE GLYCEROL)

1,2,3-THIADIZOLE
(NO CITATIONS)

1,2,3-TRIHYDROXYPROPANE
(SEE GLYCEROL)

1,2,3-TRIMETHYLPYRIDINE
(NO CITATIONS)

1,2,3,4-DIBENZOPHENANTHRENE
(SEE BENZO(G)CHRYSENE)

1,2,3,4-DIBENZPHENANTHRENE
(SEE BENZO(G)CHRYSENE)

1,2,3,4-TETRAHYDROQUINOLINE
(NO CITATIONS)

1,2,4-TRIMETHYLBENZENE
430, 431, 925, 926

1,2,5-TRIMETHYLBENZENE
(SEE 1,2,4-TRIMETHYLBENZENE)

1,2,5,6-DIBENZANTHRACENE
(SEE DIBENZO(A,H)ANTHRACENE)

1,2,5,6-DIBENZONAPHTHALENE
(SEE CHRYSENE)

1,2,5,6-DIBENZOPHENANTHRENE
(SEE BENZO(C)CHRYSENE)

1,2,5,6-DIBENZPHENANTHRENE
(SEE BENZO(C)CHRYSENE)

1,2,7,8-DIBENZACRIDINE
(SEE DIBENZO(A,J)ACRIDINE)

1,2,7,8-DIBENZANTHRACENE
(SEE DIBENZO(A,H)ANTHRACENE)

1,3-BENZENEDIOL
(SEE RESORCINOL)

1,3-BUTADIENE
836

1,3-DIETHYLBENZENE
(NO CITATIONS)

1,3-DIHYDROXYBENZENE
(SEE RESORCINOL)

1,3-DIMETHYLBENZENE
(SEE M-XYLENE)

1,3-DIMETHYLCYCLOPENTANONE
(SEE DIMETHYL CYCLOPENTANONE)

1,3-DIMETHYLNAPHTHALENE
(NO CITATIONS)

1,3-DIOXOPHTHALAN
(SEE PHTHALIC ANHYDRIDE)

1,3-ISOBENZOFURANDIONE
(SEE PHTHALIC ANHYDRIDE)

1,3-PHTHALANDIONE
(SEE PHTHALIC ANHYDRIDE)

1,3,5-TRIMETHYLBENZENE
(SEE MESITYLENE)

1,3,5-TRIOXAN
(SEE 1,3,5-TRIOXANE)

1,3,5-TRIOXANE
(NO CITATIONS)

1,3,5-TRIPHENYLBENZENE
(NO CITATIONS)

1,4-BENZENEDIOL
(SEE HYDROQUINONE)

1,4-BENZOQUINONE
978

1,4-BUTANOLIDE
(SEE DIHYDRO-2(3H)-FURANONE)

1,4-DIHYDROXYBENZENE
(SEE HYDROQUINONE)

1,4-DIMETHYL-2,3-BENZPHENANTHRENE
(SEE 7,12-DIMETHYLBENZO(A)ANTHRACENE)

1,4-DIMETHYLBENZENE
(SEE P-XYLENE)

1,4-DIOXYBENZENE
(SEE 1,4-BENZOQUINONE)

1,5-DIMETHYLNAPHTHALENE
(NO CITATIONS)

1,6-DIMETHYLNAPHTHALENE
(NO CITATIONS)

10-AZAANTHRACENE
(SEE ACRIDINE)

10,11-BENZFLUORANTHENE
(SEE BENZO(J)FLUORANTHENE)

10,11-BENZOFLUORANTHENE
(SEE BENZO(J)FLUORANTHENE)

11,12-BENZOFLUORANTHENE
(SEE BENZO(K)FLUORANTHENE)

2-(CHLOROMETHYL)-OXIRANE
(SEE 1-CHLORO-2,3-EPOXYPROPANE)

2-(2-BUTOXYETHOXY)ETHANOL
(NO CITATIONS)

2-AMINO-1-METHYLBENZENE
(SEE O-TOLUIDINE)

2-AMINO-2-METHYLPROPANE
(SEE T-BUTYL AMINE)

2-BUTANOL
(SEE S-BUTYL ALCOHOL)

2-BUTOXYETHANOL
228, 296, 450, 451, 583, 667, 708
1029, 1118, 1307

2-ETHYL-GAMMA-PICOLINE
(SEE 2-ETHYL-4-METHYLPYRIDINE)

2-ETHYL-4-METHYLPYRIDINE
(NO CITATIONS)

2-ETHYL-6-METHYLPYRIDINE
(NO CITATIONS)

2-ETHYLANILINE
(SEE O-ETHYLANILINE)

2-ETHYLBENZIMIDAZOLE
(NO CITATIONS)

2-ETHYLPYRIDINE
(NO CITATIONS)

2-ETHYLTOLUENE
(SEE O-ETHYLTOLUENE)

2-HEPTANONE
(NO CITATIONS)

2-HEXANONE
(NO CITATIONS)

2-HYDROXYNAPHTHALENE
(SEE BETA-NAPHTHOL)

2-HYDROXYPHENOL
(SEE CATECHOL)

2-HYDROXYTOLUENE
(SEE O-CRESOL)

2-ISOPROPYLBENZIMIDAZOLE
(NO CITATIONS)

2-METHYL-2-HYANETHIOL
(NO CITATIONS)

2-METHYL-2-PENTANOL-4-ONE
(SEE 4-HYDROXY-4-METHYL-2-PENTANONE)

2-METHYL-2-PROPANOL
(SEE T-BUTYL ALCOHOL)

2-METHYL-3-PENTANONE
(NO CITATIONS)

2-METHYL-4-ETHYLPHENOL
(NO CITATIONS)

2-METHYL-4-ETHYLPYRIDINE
(SEE ALPHA-COLLIDINE)

2-METHYL-4-PENTANONE
(NO CITATIONS)

2-METHYL-5-ETHYLPYRIDINE
(NO CITATIONS)

2-METHYL-5-HEXANONE
(NO CITATIONS)

2-METHYLANILINE
(SEE O-TOLUIDINE)

2-METHYLANTHRACENE
(NO CITATIONS)

2-METHYLBENZIMIDAZOLE
(NO CITATIONS)

2-METHYLCYCLOPENTANONE
(NO CITATIONS)

2-METHYLNAPHTHALENE
293

2-METHYLPHENOL
(SEE O-CRESOL)

2-METHYLPROPANENITRILE
(NO CITATIONS)

2-METHYLPYRIDINE
1096

2-METHYLQUINOLINE
(SEE QUINALDINE)

2-N-BUTYOXYETHANOL
(NO CITATIONS)

2-NAPHTHOL
(SEE BETA-NAPHTHOL)

2-NAPHTHYLAMINE
(NO CITATIONS)

2-OCTANONE
(NO CITATIONS)

2-PHENYLNAPHTHALENE
(NO CITATIONS)

2-PHENYLPROPANE
(SEE ISOPROPYL BENZENE)

2-PHENYLPROPENE
(SEE ALPHA-METHYLSTYRENE)

2-PHENYLPROPYLENE
(SEE ALPHA-METHYLSTYRENE)

2-PICOLINE
(SEE 2-METHYLPYRIDINE)

2-PROPANOL
(SEE ISOPROPYL ALCOHOL)

2-PROPENAL
(SEE ACRALDEHYDE)

2-THIAPROPANE
(SEE DIMETHYL SULFIDE)

2-THIOPROPANE
(SEE DIMETHYL SULFIDE)

2,2-DIMETHYLHEXANE
(NO CITATIONS)

2,2'-DICHLOROETHYL ETHER
(SEE DI(2-CHLOROETHYL)ETHER)

2,2'-DIPYRIDINE
(NO CITATIONS)

2,3-BENZANTHRACENE
(SEE NAPTHACENE)

2,3-BENZODIPHENYLENOXIDE
(NO CITATIONS)

2,3-BENZOFLUORENE
(NO CITATIONS)

2,3-BENZOPHENANTHRENE
(SEE BENZO(A)ANTHRACENE)

2,3-BENZOPYRROLE
(SEE INDOLE)

2,3-BENZPHENANTHRENE
(SEE BENZO(A)ANTHRACENE)

2,3-DIHYDROINDENE
(SEE INDANE)

2,3-DIMETHYLCYCLOPENTANONE
(SEE DIMETHYL CYCLOPENTANONE)

2,3-DIMETHYLNAPHTHALENE
(NO CITATIONS)

2,3-DIMETHYLPHENOL
(SEE 2,3-XYLENOL)

2,3-DIMETHYLPYRIDINE
(SEE 2,3-LUTIDINE)

2,3-DIMETHYLTHIOPHENE
(SEE DIMETHYL THIOPHENE)

2,3-LUTIDINE
(NO CITATIONS)

2,3-THIOXENE
(SEE DIMETHYL THIOPHENE)

2,3-XYLENOL
(NO CITATIONS)

2,3,5-TRIMETHYLPHENOL
(NO CITATIONS)

2,4-DIMETHYLANILINE
(NO CITATIONS)

2,4-DIMETHYLCYCLOPENTANONE
(SEE DIMETHYL CYCLOPENTANONE)

2,4-DIMETHYLPHENOL
(SEE 2,4-XYLENOL)

2,4-DIMETHYLPYRIDINE
(SEE 2,4-LUTIDINE)

2,4-DIMETHYLTHIOPHENE
(SEE DIMETHYL THIOPHENE)

2,4-HEXADIENEDIOIC ACID, CIS CIS
(NO CITATIONS)

2,4-HEXADIENEDIOIC ACID, TRANS TRANS
(NO CITATIONS)

2,4-INTIDINE
(NO CITATIONS)

2,4-LUTIDINE
(NO CITATIONS)

2,4-THIOXENE
(SEE DIMETHYL THIOPHENE)

2,4-XYLENOL
(NO CITATIONS)

2,4-XYLIDINE
(SEE 2,4-DIMETHYLANILINE)

2,4,6-TRIMETHYLPYRIDINE
(NO CITATIONS)

2,5-DIMETHYL-2-CYCLOPENTENONE
(NO CITATIONS)

2,5-DIMETHYLPHENOL
(SEE 2,5-XYLENOL)

2,5-DIMETHYLPYRIDINE
(SEE 2,5-LUTIDINE)

2,5-DIMETHYLTHIOPHENE
(SEE DIMETHYL THIOPHENE)

2,5-DMP
(SEE 2,5-XYLENOL)

2,5-FURANDIONE
(SEE MALEIC ANHYDRIDE)

2,5-LUTIDINE
(NO CITATIONS)

2,5-XYLENOL
(NO CITATIONS)

2,6-DIHYDROXY-1,4-BENZOQUINONE
(NO CITATIONS)

2,6-DIMETHYLANILINE
966

2,6-DIMETHYLBENZOFURAN
(NO CITATIONS)

2,6-DIMETHYLNAPHTHALENE
(NO CITATIONS)

2,6-DIMETHYLPHENOL
(SEE 2,6-XYLENOL)

2,6-DIMETHYLPYRIDINE
(SEE 2,6-LUTIDINE)

2,6-DIMETHYLQUINOLINE
(NO CITATIONS)

2,6-DMP
(SEE 2,6-XYLENOL)

2,6-INTIDINE
(NO CITATIONS)

2,6-LUTIDINE
(NO CITATIONS)

2,6-XYLENOL
(NO CITATIONS)

2,6-XYLIDINE
(SEE 2,6-DIMETHYLANILINE)

20-METHYLCHOLANTHRENE
(SEE 3-METHYLCHOLANTHRENE)

24-METHYL-5-ALPHA-CHOLESTANE
(SEE ERGOSTANE)

3-AMINO-1-METHYLBENZENE
(SEE M-TOLUIDINE)

3-CHLORO-1,2-EPOXYPROPANE
(SEE 1-CHLORO-2,3-EPOXYPROPANE)

3-CHLORO-1,2-PROPYLENE OXIDE

(SEE 1-CHLORO-2,3-EPOXYPROPANE)

3-CHLOROPROPYLENE
(SEE 1-CHLORO-2-PROPENE)

3-ETHYL-GAMMA-PICOLINE
(SEE BETA-COLLIDINE)

3-ETHYL-4-METHYLPYRIDINE
(SEE BETA-COLLIDINE)

3-ETHYLPYRIDINE
(NO CITATIONS)

3-ETHYLTOLUENE
(SEE M-ETHYLTOLUENE)

3-HEPTANONE
(NO CITATIONS)

3-HEXANONE
(NO CITATIONS)

3-HYDROXYTOLUENE
(SEE M-CRESOL)

3-METHYL-2-PENTANONE
(NO CITATIONS)

3-METHYL-6-ETHYLPHENOL
(NO CITATIONS)

3-METHYLCHOLANTHRENE
17, 739, 950, 951, 967

3-METHYLINDENE
(NO CITATIONS)

3-METHYLPHENOL
(SEE M-CRESOL)

3-METHYLTHIOPHENE
(NO CITATIONS)

3-OCTANONE
(NO CITATIONS)

3-OXA-1-HEPTANOL
(SEE 2-BUTOXYETHANOL)

3-PICOLINE
674, 677

3-THIOTOLENE
(SEE 3-METHYLTHIOPHENE)

3,3-DIMETHYL-2-BUTANONE
(SEE METHYL T-BUTYL KETONE)

3,3-DIPHENYLPROPANOL
(NO CITATIONS)

3,4-BENZOCHRYSENE
(SEE PICENE)

3,4-BENZOPHENANTHRENE
(SEE BENZO(C)PHENANTHRENE)

3,4-BENZOPYRENE
(SEE BENZO(A)PYRENE)

3,4-BENZOQUINOLINE
(SEE PHENANTHRIDINE)

3,4-BENZPYRENE
(SEE BENZO(A)PYRENE)

3,4-BP
(SEE BENZO(A)PYRENE)

3,4-DIMETHYLPHENOL
(SEE 3,4-XLYENOL)

3,4-DIMETHYLPYRIDINE
(SEE 3,4-LUTIDINE)

3,4-DMP
(SEE 3,4-XLYENOL)

3,4-LUTIDINE
(NO CITATIONS)

3,4-XLYENOL
(NO CITATIONS)

3,4,5,6-DIBENZACRIDINE
(SEE DIBENZO(A,J)ACRIDINE)

3,5-DIMETHYLPYRIDINE
(SEE 3,5-LUTIDINE)

3,5-DMP
(SEE 3,5-XYLENOL)

3,5-LUTIDINE
(NO CITATIONS)

3,5-XYLENOL
(NO CITATIONS)

4-BUTYROLACTONE
(SEE DIHYDRO-2(3H)-FURANONE)

4-CRESOL
(SEE P-CRESOL)

4-ETHYL-ALPHA-PICOLINE
(SEE ALPHA-COLLIDINE)

4-ETHYLANILINE
(SEE P-ETHYLANILINE)

4-ETHYLTOLUENE
(SEE P-ETHYLTOLUENE)

4-HEPTANONE
(NO CITATIONS)

4-HYDROXY-2-KETO-4-METHYLPENTANE
(SEE 4-HYDROXY-4-METHYL-2-PENTANONE)

4-HYDROXY-4-METHYL-2-PENTANONE
(NO CITATIONS)

4-HYDROXYBUTYRIC ACID
(SEE DIHYDRO-2(3H)-FURANONE)

4-HYDROXYTOLUENE
(SEE P-CRESOL)

4-INDANOL
(NO CITATIONS)

4-METHYL-2-ETHYLPHENOL
(NO CITATIONS)

4-METHYLMORPHOLINE
(SEE N-METHYLMORPHOLINE)

4-METHYLPHENOL
(SEE P-CRESOL)

4-METHYLPYRIDINE
1096

4-METHYLQUINOLINE
(NO CITATIONS)

4-OCTANONE
(NO CITATIONS)

4-PICOLINE
(SEE 4-METHYLPYRIDINE)

4,5-BENZOPYRENE
(SEE BENZO(E)PYRENE)

5-ETHYL-ALPHA-PICOLINE
(SEE 2-METHYL-5-ETHYLPYRIDINE)

5-HYDROXY-3,4-BENZOPYRENE
(NO CITATIONS)

5-HYDROXYBENZOPYRENE
(SEE 5-HYDROXY-3,4-BENZOPYRENE)

5-METHYL-3-HEPTANONE
(NO CITATIONS)

5-METHYLBENZIMIDAZOLE
(NO CITATIONS)

5,6-DIMETHYLBENZOFURAN
(NO CITATIONS)

6-ETHYL-ALPHA-PICOLINE
(SEE 2-ETHYL-6-METHYLPYRIDINE)

6-METHYLQUINALDINE
(SEE 2,6-DIMETHYLQUINOLINE)

7-AZADIBENZ(A,J)ANTHRACENE
(SEE DIBENZO(A,J)ACRIDINE)

7,12-DIMETHYLBENZ(A)ANTHRACENE
(SEE 7,12-DIMETHYLBENZO(A)ANTHRACENE)

7,12-DIMETHYLBENZO(A)ANTHRACENE
(NO CITATIONS)

7,12-DMBA
(SEE 7,12-DIMETHYLBENZO(A)ANTHRACENE)

7,8-BENZOCHINOLINE
(NO CITATIONS)

7,8-BENZOFLUORANTHENE
(SEE BENZO(J)FLUORANTHENE)

7,8-DIHYDROXY-3,4-BENZOPYRENE
(NO CITATIONS)

7,8-DIHYDROXYBENZOPYRENE
(SEE 7,8-DIHYDROXY-3,4-BENZOPYRENE)

8-HYDROXY-3,4-BENZOPYRENE
(NO CITATIONS)

8-HYDROXYBENZOPYRENE
(SEE 8-HYDROXY-3,4-BENZOPYRENE)

8-METHYLQUINOLINE
(NO CITATIONS)

9-AZAFLUORENE
(SEE CARBAZOLE)

9-AZAPHENANTHRENE
(SEE PHENANTHRIDINE)

9-METHYLANTHRACENE
(NO CITATIONS)

9-METHYLFLUORENE
(NO CITATIONS)

9,10-BENZOPHENANTHRENE
(SEE TRIPHENYLENE)

9,10-DIHYDROANTHRACENE
(NO CITATIONS)

9,10-OCTADECENOIC ACID
(SEE CIS-9-OCTADECENOIC ACID)

KEY-WORD INDEX

ABSORPTION
(SEE SORPTION)

ABUNDANCE
38, 724

ACCLIMATION
266, 315, 376, 379, 391, 394, 478, 504
692, 731, 737, 798, 816, 824, 976, 1304

ACCUMULATION
2, 39, 60, 86, 190, 204, 229, 242, 246
388, 413, 455, 500, 548, 570, 571, 596
687, 709, 723, 740, 743, 745, 767, 787
896, 914, 918, 965, 1001, 1017, 1029
1079, 1111, 1138, 1143, 1160, 1161
1219, 1236, 1273, 1276, 1307, 1309

ACCURACY
(SEE STATISTICS)

ACIDITY
2, 9, 35, 41, 53, 96, 114, 144, 166
188, 199, 200, 256, 258, 271, 286, 293
295, 309, 313, 342, 345, 347, 352, 360
361, 369, 391, 393, 408, 416, 417, 424
432, 433, 438, 441, 443, 449, 466, 470
479, 484, 488, 491, 523, 527, 536, 538
565, 578, 597, 598, 601, 615, 639, 640
641, 647, 667, 689, 709, 733, 747, 762
800, 802, 803, 813, 815, 817, 818, 821
831, 837, 862, 890, 892, 893, 954, 956
968, 983, 995, 998, 1000, 1001, 1011
1026, 1030, 1033, 1093, 1094, 1105
1108, 1111, 1113, 1122, 1150, 1166
1197, 1207, 1208, 1209, 1219, 1222
1223, 1224, 1235, 1244, 1281, 1304
1306

ACTIVATED CARBON
(SEE WASTE TREATMENT, CARBON FILTRATION)

ACTIVATED SLUDGE
(SEE WASTE TREATMENT, SLUDGE)

ACTIVATION ANALYSIS
310, 389

ACUTE TOXICITY
(SEE TOXICOLOGY, ACUTE)

ADAPTATION
(SEE ACCLIMATION)

ADENOSINE TRIPHOSPHATE
(SEE BIOCHEMISTRY, NUCLEOTIDE)

ADSORPTION
(SEE SORPTION)

AERATION
1237

AEROBIC
2, 144, 202, 278, 312, 470, 719, 976
989, 1132, 1278

AEROSOL
(SEE AIR)

AGE DEPENDENCE
21, 315, 772, 914

AGGLOMERATION
(SEE FLOCCULATION)

AIR
3, 5, 9, 12, 60, 78, 152, 156, 171
187, 244, 266, 284, 389, 449, 455, 531
544, 545, 593, 615, 688, 700, 786, 787
802, 833, 913, 914, 981, 982, 983
1002, 1071, 1073, 1095, 1105
1165, 1250

ALCOHOL OXIDOREDUCTASES
70, 119, 409, 490, 498, 1007, 1008

ALDEHYDE OXIDOREDUCTASES
119, 289, 490

ALKALINITY
56, 300, 309, 319, 368, 417, 438, 461
531, 656, 810, 893, 981, 1150

AMINASE
694

AMYLASE
996

ANAEROBIC
2, 11, 79, 278, 354, 365, 408, 411
504, 720, 968, 1185, 1248

ANALYTICAL METHODS
1, 5, 8, 9, 10, 14, 27, 32, 33, 35, 36
37, 43, 44, 47, 48, 56, 60, 62, 76, 77
88, 89, 92, 93, 98, 104, 115, 121, 128
133, 135, 136, 137, 145, 155, 157, 158
159, 160, 162, 163, 167, 169, 174, 179
189, 192, 194, 196, 203, 211, 213, 223
225, 226, 231, 234, 235, 237, 238, 239
243, 245, 246, 251, 253, 255, 256, 257
259, 264, 265, 271, 272, 279, 285, 298
303, 304, 306, 307, 309, 310, 314, 319
320, 321, 322, 323, 333, 334, 337, 339
350, 352, 355, 356, 358, 360, 361, 363
364, 368, 369, 372, 382, 383, 384, 387
388, 389, 390, 400, 406, 407, 417, 424
427, 428, 429, 432, 433, 439, 447, 448
456, 459, 460, 461, 464, 466, 468, 481

484, 485, 493, 505, 507, 513, 515, 516
517, 518, 519, 520, 521, 523, 524, 532
540, 542, 543, 545, 546, 553, 554, 555
558, 560, 561, 566, 572, 573, 575, 577
578, 588, 592, 594, 597, 598, 601, 602
603, 606, 607, 608, 609, 619, 623, 625
639, 640, 641, 662, 689, 690, 691, 701
707, 708, 710, 726, 730, 742, 748, 752
758, 770, 781, 784, 785, 791, 794, 811
812, 813, 814, 816, 820, 821, 822, 823
825, 826, 827, 834, 846, 849, 852, 853
861, 863, 876, 878, 884, 885, 888, 893
897, 901, 902, 906, 907, 913, 914, 925
933, 934, 935, 938, 949, 955, 958, 971
972, 976, 977, 980, 986, 1003, 1009
1018, 1019, 1028, 1035, 1044, 1045
1051, 1052, 1054, 1056, 1058, 1087
1098, 1099, 1110, 1113, 1128, 1130
1139, 1141, 1146, 1147, 1151, 1164
1167, 1174, 1180, 1195, 1199, 1200
1201, 1204, 1213, 1216, 1217, 1220
1223, 1224, 1227, 1235, 1242, 1247
1255, 1259, 1260, 1261, 1272, 1279
1282, 1288, 1289, 1291, 1292, 1302
1307, 1312
SEE ALSO ACTIVATION ANALYSIS;
CHROMATOGRAPHY; COLORIMETRIC ANALYSIS;
ELECTROCHEMISTRY; SPECTROMETRY;
WATER QUALITY

ANIMAL BEHAVIOR
(SEE BEHAVIOR)

ANTIOXIDANT
480, 730, 860

AQUIFER
(SEE GROUND WATER)

ARYL HYDROCARBON HYDROXYLASES
17

ATP
(SEE BIOCHEMISTRY, NUCLEOTIDE)

AVOIDANCE
(SEE BEHAVIOR)

BACTERIOLOGY
(SEE MICROBIOLOGY)

BEHAVIOR
122, 224, 237, 315, 333, 353, 378, 380
529, 742, 816, 1050, 1092, 1144, 1169
1170, 1221, 1273, 1274, 1300

BENTHOS
343, 864

BENZOPYRENE HYDROXYLASE
17, 947

BIBLIOGRAPHIES
(SEE REVIEWS)

BIOACCUMULATION
(SEE ACCUMULATION)

BIOASSAYS
(SEE TOXICOLOGY, BIOASSAYS)

BIOCHEMICAL OXYGEN DEMAND
2, 9, 91, 95, 119, 162, 202, 206, 215
216, 289, 295, 321, 425, 467, 469, 498
534, 564, 604, 728, 886, 893, 976, 1000
1027, 1030, 1111, 1117, 1174, 1257
1276

BIOCHEMISTRY, GENERAL
19, 37, 53, 70, 72, 73, 85, 117, 164
183, 199, 200, 201, 214, 237, 252, 277
318, 327, 328, 329, 331, 354, 383, 386
403, 404, 410, 412, 419, 420, 470, 474
475, 513, 527, 534, 536, 547, 564, 567
614, 617, 682, 684, 736, 743, 775, 803
805, 838, 880, 886, 920, 992, 1001
1011, 1032, 1037, 1058, 1150, 1152
1161, 1164, 1174, 1179, 1208, 1209
1214, 1228, 1243, 1262, 1263, 1264
SEE ALSO MUTAGENIC; PHYSIOLOGY, CELL

BIOCHEMISTRY, ENZYMES
16, 23, 54, 65, 70, 130, 144, 193, 204
252, 281, 282, 394, 413, 416, 417, 486
490, 495, 513, 526, 540, 562, 613, 694
758, 774, 783, 851, 909, 911, 951, 957
966, 967, 996, 999, 1005, 1006, 1011
1014, 1032, 1037, 1085, 1086, 1117
1150, 1152, 1248, 1262
SEE ALSO SPECIFIC ENZYMES

BIOCHEMISTRY, LIPID
342, 399, 464, 536, 538, 668, 695, 756
791, 802, 965, 1033, 1090, 1092, 1135
1202, 1277

BIOCHEMISTRY, METABOLISM
2, 15, 16, 18, 19, 36, 39, 60, 70, 99
100, 119, 123, 125, 131, 140, 143, 144
160, 183, 200, 201, 202, 207, 209, 214
215, 216, 228, 241, 247, 252, 269, 280
281, 283, 289, 293, 300, 301, 312, 327
328, 329, 331, 344, 345, 346, 347, 387
410, 411, 415, 416, 417, 418, 419, 420
421, 430, 436, 440, 444, 457, 462, 513
534, 540, 548, 551, 553, 567, 570, 582
613, 629, 630, 631, 632, 633, 634, 635
636, 645, 673, 682, 693, 710, 713, 714
715, 723, 739, 740, 743, 763, 774, 775
780, 783, 789, 798, 803, 804, 824, 828
839, 887, 892, 896, 918, 920, 924, 925
927, 932, 950, 951, 957, 964, 967, 978

988, 994, 995, 999, 1000, 1001, 1007
1008, 1011, 1017, 1024, 1025, 1029
1032, 1034, 1040, 1090, 1092, 1124
1126, 1129, 1138, 1143, 1152, 1157
1208, 1210, 1221, 1228, 1232, 1243
1248, 1262, 1263, 1264, 1273, 1277
1280

BIOCHEMISTRY, NUCLEOTIDE
15, 16, 94, 98, 312, 570, 747, 851
920, 975, 1162, 1228, 1230, 1264

BIOCHEMISTRY, PROTEIN
18, 85, 318, 331, 342, 399, 436, 464
763, 764, 920, 950, 1135, 1228

BIOCONCENTRATION
(SEE ACCUMULATION)

BIODEGRADATION
12, 23, 91, 186, 247, 250, 291, 293
302, 312, 335, 409, 413, 416, 417, 418
444, 467, 470, 474, 504, 525, 530, 535
536, 559, 563, 571, 580, 613, 624, 680
683, 722, 723, 724, 729, 742, 744, 759
765, 767, 779, 780, 800, 845, 879, 881
921, 930, 1011, 1020, 1027, 1057, 1064
1101, 1118, 1122, 1132, 1168, 1183
1226, 1252, 1253, 1254, 1257, 1258
1295, 1304, 1307, 1311

BIODETERIORATION
(SEE BIODEGRADATION)

BIOLOGICAL MODELS
(SEE MODELS)

BIOLOGICAL OXYGEN DEMAND
(SEE BIOCHEMICAL OXYGEN DEMAND)

BIOMAGNIFICATION
(SEE ACCUMULATION)

BITUMEN
(SEE TAR SANDS)

BITUMINOUS
(SEE COAL)

BLOOD
(SEE PHYSIOLOGY, CARDIOVASCULAR-BLOOD)

BLOWDOWN
(SEE COOLING SYSTEMS)

BOD
(SEE BIOCHEMICAL OXYGEN DEMAND)

CARBONIZATION
(SEE COAL CARBONIZATION)

CARCINOGENIC
15, 16, 17, 18, 36, 107, 145, 146, 151
170, 262, 300, 301, 324, 325, 326, 395
398, 415, 421, 453, 455, 464, 474, 513
549, 550, 606, 740, 757, 766, 783, 823
851, 895, 898, 913, 955, 963, 967, 997
1051, 1054, 1070, 1071, 1072, 1073
1074, 1075, 1089, 1099, 1172, 1173
1285, 1296, 1301

CARDIOVASCULAR
(SEE PHYSIOLOGY, CARDIOVASCULAR-BLOOD)

CATALASE
1048

CELL
(SEE PHYSIOLOGY, CELL)

CHEMICAL OXYGEN DEMAND
7, 9, 38, 188, 197, 234, 364, 390, 833
1140

CHEMOTAXIS
(SEE BEHAVIOR)

CHLORINATION
(SEE WASTE TREATMENT, CHLORINATION)

CHLOROPHYLL
178, 497, 541, 1161

CHLOROPLASTS
(SEE CHLOROPHYLL)

CHOLINESTERASE
773, 774, 880

CHROMATOGRAPHY, GENERAL
7, 8, 33, 35, 37, 48, 67, 68, 87, 92
98, 128, 141, 145, 158, 160, 179, 192
194, 212, 213, 222, 225, 235, 237, 239
246, 251, 257, 264, 271, 272, 279, 281
293, 296, 298, 303, 304, 306, 309, 314
322, 323, 324, 337, 350, 360, 361, 383
406, 416, 429, 432, 433, 438, 441, 442
464, 465, 466, 493, 496, 505, 509, 520
523, 531, 538, 542, 546, 553, 555, 558
560, 565, 572, 573, 577, 578, 592, 597
601, 602, 603, 606, 609, 612, 623, 625
634, 640, 642, 648, 689, 702, 704, 715
719, 725, 726, 746, 747, 748, 781, 782
813, 821, 825, 827, 850, 852, 853, 861
876, 882, 884, 889, 897, 905, 906, 928
933, 934, 935, 937, 954, 958, 980, 999
1002, 1033, 1060, 1067, 1076, 1098
1113, 1123, 1124, 1128, 1130, 1164
1166, 1190, 1191, 1194, 1199, 1201
1204, 1206, 1223, 1227, 1235, 1247
1255, 1259, 1260, 1279, 1281, 1288
1289, 1302

CHROMATOGRAPHY, ELECTRO-
526, 861, 999

CHROMATOGRAPHY, GAS
37, 48, 76, 91, 92, 106, 110, 121, 145
158, 160, 179, 213, 225, 235, 246, 251
257, 264, 272, 296, 298, 309, 310, 314
323, 324, 337, 350, 383, 389, 416, 441
464, 466, 505, 520, 521, 523, 531, 538
542, 546, 553, 560, 572, 573, 577, 578
597, 601, 602, 612, 623, 703, 704, 726
781, 791, 823, 826, 827, 832, 853, 876
882, 884, 889, 897, 905, 907, 928, 934
937, 955, 1060, 1123, 1130, 1132, 1166
1201, 1247, 1259, 1260, 1281, 1302

CHROMATOGRAPHY, ION EXCHANGE
746

CHROMATOGRAPHY, LIQUID
7, 128, 192, 360, 361, 464, 542, 572
573, 592, 603, 606, 634, 689, 825, 850
882, 1201, 1235, 1279, 1288

CHROMATOGRAPHY, PAPER
183, 361, 438, 800, 1067, 1263, 1264

CHROMATOGRAPHY, THIN LAYER
141, 212, 324, 360, 411, 442, 527, 634
703, 746, 747, 791, 825, 1000, 1033
1123, 1190, 1191, 1192, 1194, 1199

CHROMOSOMAL ABERRATIONS
(SEE GENETICS)

CHRONIC TOXICITY
(SEE TOXICOLOGY, CHRONIC)

CHYMOTRYPSIN
996

CLAY
117, 180, 284, 742, 1266

CLEAVAGE
1032, 1037

COAL
4, 38, 101, 108, 187, 279, 316, 366
389, 398, 427, 455, 508, 511, 512, 523
525, 544, 572, 615, 626, 699, 706, 833
834, 913, 914, 949, 955, 998, 1012
1045, 1050, 1057, 1120, 1141, 1199
1201, 1244

COAL CARBONIZATION
87, 176, 199, 258, 574, 913, 914, 998

COAL COKING
9, 102, 157, 176, 199, 258, 435, 559
600, 733, 770, 949, 984, 998, 1066
1089, 1095, 1134, 1145, 1294

COAL FLY ASH
846

COAL GASIFICATION
5, 38, 150, 187, 260, 261, 427, 523
525, 544, 826, 833, 834, 906, 913, 914
1045, 1057, 1141

COAL LIQUEFACTION
389, 427, 511, 523, 572, 913, 914, 955
1012

COAL LIQUIDS
(SEE COAL)

COAL TAR
(SEE COAL)

COD
(SEE CHEMICAL OXYGEN DEMAND)

COED PROCESS
(SEE COAL LIQUEFACTION)

COENZYMES
94

COKE
(SEE COAL COKING)

COKING
(SEE COAL COKING)

COLORIMETRIC ANALYSIS
10, 27, 89, 106, 162, 188, 212, 339
363, 447, 707, 800, 859, 1018, 1036
1291

COLORIMETRY
(SEE COLORIMETRIC ANALYSIS)

COMMUNITIES
343

CONCENTRATION FACTOR
(SEE ACCUMULATION)

CONDUCTIVITY
(SEE ELECTROCHEMISTRY)

CONTAMINANTS
(SEE POLLUTANTS)

COOLING SYSTEMS
126, 427, 824

COST ANALYSIS
(SEE ECONOMICS)

COST BENEFIT
(SEE ECONOMICS)

COULOMETRY
1167, 1216

CRESOLASE
526

CRITERIA
9, 95, 309, 427, 507, 604, 757, 829
854, 949, 955
SEE ALSO STANDARDS

CRUDE OIL
(SEE PETROLEUM, OIL)

CULTURE
7, 11, 94, 112, 114, 185, 228, 275
287, 300, 330, 346, 455, 470, 534, 536
574, 624, 682, 755, 791, 793, 800, 832
919, 943, 944, 945, 946, 962, 1027
1033, 1101, 1111, 1117, 1123, 1132
1143, 1153, 1168, 1185, 1209, 1252
1295, 1300

CULTURE-MEDIA
(SEE CULTURE)

CYCLING
94, 100, 111, 272, 277, 300, 348, 407
413, 464, 740, 1172, 1304

CYTOCHROME
(SEE BIOCHEMISTRY, ENZYMES)

CYTOLOGY
(SEE PHYSIOLOGY, CELL)

DECOMPOSITION
(SEE DEGRADATION)

DECONTAMINATION
123, 395, 1041, 1069, 1070, 1303

DEETHYLASE
562, 967

DEGENERATION
(SEE DEGRADATION)

DEGRADATION
4, 9, 11, 12, 13, 23, 61, 72, 73, 79
91, 94, 97, 99, 117, 124, 149, 156, 186
208, 233, 242, 250, 252, 257, 272, 273
275, 276, 287, 291, 297, 335, 341, 344
351, 365, 394, 409, 410, 413, 415, 416
417, 418, 419, 420, 422, 423, 450, 451
452, 462, 463, 470, 474, 475, 476, 486
490, 491, 504, 525, 527, 530, 533, 534
535, 547, 552, 556, 563, 568, 569, 580
599, 613, 614, 624, 631, 632, 651, 670
680, 681, 682, 683, 695, 717, 720, 723
724, 729, 731, 742, 744, 759, 764, 771
779, 780, 792, 793, 796, 800, 823, 845
847, 879, 883, 890, 910, 911, 916, 919
922, 963, 973, 989, 990, 991, 1027
1037, 1043, 1057, 1062, 1063, 1064
1065, 1066, 1084, 1085, 1086, 1096
1100, 1102, 1103, 1118, 1122, 1145
1158, 1159, 1166, 1173, 1185, 1196
1209, 1214, 1225, 1226, 1232, 1237
1241, 1254, 1258, 1262, 1265, 1293
1297, 1299, 1304, 1311
SEE ALSO BIODEGRADATION

DEHYDROGENASE
209, 308, 327, 328, 471, 694, 714
1205, 1228

DEMETHYLASE
562, 966, 967, 1152

DERIVATIVES
160, 192, 221, 238, 293, 299, 300, 331
339, 358, 416, 485, 555, 597, 598, 647
658, 661, 715, 765, 767, 782, 980, 1060
1096, 1148, 1244, 1313

DESIGN
9, 178, 243, 366, 402, 427, 593, 914
949, 955, 1057, 1277, 1291

DESIGN CRITERIA
(SEE CRITERIA)

DESORPTION
(SEE SORPTION)

DETECTION
(SEE ANALYTICAL METHODS)

DETERIORATION
(SEE DEGRADATION)

DIESEL
(SEE PETROLEUM, FUELS)

DIGESTION
188, 255, 408, 565, 720, 734, 957, 968
1090, 1092, 1259

DISPOSAL
(SEE WASTE TREATMENT, GENERAL)

DISSOLVED GASES
95, 309, 315, 535, 604, 893

DISTILLATION

155, 225, 314, 447, 482, 820, 822, 984
1044, 1200, 1224

DNA
(SEE BIOCHEMISTRY, NUCLEOTIDE)

DRINKING WATER
57, 151, 162, 179, 213, 235, 292, 296
297, 298, 363, 395, 396, 397, 398, 402
520, 593, 602, 623, 651, 670, 701, 801
819, 889, 903, 904, 949, 997, 1019
1041, 1069, 1146, 1147, 1182, 1190
1191, 1192, 1194, 1198, 1199, 1215
1255, 1303, 1305, 1306, 1310

ECOLOGY
34, 39, 149, 204, 219, 253, 315, 330
343, 386, 436, 462, 504, 511, 525, 627
681, 723, 741, 752, 765, 766, 767, 899
976, 1079, 1131, 1202, 1221, 1236, 1237
1266, 1276, 1277, 1293

ECONOMICS
5, 9, 96, 352, 366, 425, 543, 593, 939
949, 998, 1012, 1026, 1165, 1291

ECOSYSTEM
(SEE ECOLOGY)

EFFLUENTS
10, 43, 44, 47, 69, 78, 80, 87, 89
101, 116, 122, 150, 154, 157, 165, 174
196, 199, 240, 242, 244, 251, 258, 259
270, 302, 305, 314, 316, 322, 333, 335
350, 357, 366, 367, 389, 398, 402, 405
407, 425, 427, 474, 506, 508, 511, 524
525, 538, 539, 543, 564, 600, 608, 731
733, 738, 748, 752, 792, 800, 816, 824
826, 831, 833, 843, 878, 885, 913, 914
932, 939, 949, 955, 1057, 1127, 1140
1145, 1163, 1217, 1235, 1237, 1242
1243, 1272, 1291, 1294, 1305, 1307
1311
SEE ALSO RESIDUES; WATER QUALITY

EGG
(SEE PHYSIOLOGY, GROWTH-DEVELOPMENT)

ELECTROANALYSIS
(SEE ELECTROCHEMISTRY)

ELECTROCHEMISTRY
84, 243, 256, 309, 506, 758, 785, 844
953, 1035, 1213, 1291

ELECTROCHROMATOGRAPHY
(SEE CHROMATOGRAPHY, ELECTRO-)

ELECTROLYSIS
(SEE ELECTROCHEMISTRY)

ELECTRON MICROSCOPY
(SEE MICROSCOPY)

ELECTROPHORESIS
(SEE CHROMATOGRAPHY, ELECTRO-)

EM
(SEE MICROSCOPY)

EMBRYOLOGY
(SEE PHYSIOLOGY, GROWTH-DEVELOPMENT)

EMISSION SPECTROMETRY
(SEE SPECTROMETRY, EMISSION)

ENDOCRINE
(SEE PHYSIOLOGY, ENDOCRINE)

ENVIRONMENTAL IMPACT
10, 39, 44, 45, 74, 90, 101, 145, 171
179, 185, 187, 225, 317, 325, 330, 337
352, 373, 427, 455, 466, 480, 511, 513
538, 543, 544, 545, 562, 565, 572, 597
613, 686, 692, 715, 718, 733, 765, 766
767, 780, 802, 822, 826, 833, 834, 846
853, 879, 913, 919, 939, 948, 951, 955
998, 1049, 1050, 1054, 1105, 1146, 1172
1173, 1201, 1221, 1251, 1253, 1256
1257, 1258, 1289, 1293

ENZYMOLOGY
(SEE BIOCHEMISTRY, ENZYMES)

ESTERASE
20, 694

ESTUARY
112, 180, 269, 293, 500, 742, 744
1221, 1253

EXCRETION
(SEE PHYSIOLOGY, RENAL-HEPATIC)

EXPOSURE
164, 184, 191, 266, 315, 388, 500, 644
734, 817, 829, 848, 895, 1221, 1236
1276, 1307

EXTRACTION
14, 55, 89, 96, 133, 145, 176, 197
210, 213, 246, 267, 268, 272, 273, 300
301, 314, 323, 324, 333, 337, 399, 427
435, 438, 443, 461, 464, 512, 528, 539
587, 607, 610, 611, 653, 654, 655, 656
657, 658, 659, 660, 661, 662, 663, 664
665, 666, 667, 696, 706, 711, 726, 764
801, 820, 822, 823, 835, 856, 857, 858
859, 928, 955, 971, 972, 984, 988, 1012
1038, 1045, 1080, 1081, 1097, 1115
1123, 1124, 1128, 1134, 1135, 1136
1137, 1138, 1147, 1177, 1178, 1187

1222, 1229, 1259, 1294, 1302

FATS
(SEE BIOCHEMISTRY, LIPID)

FECUNDITY
(SEE PHYSIOLOGY, REPRODUCTIVE)

FERMENTATION
(SEE ANAEROBIC)

FILTRATION
81, 240, 482, 725, 949, 1012

FLOCCULATION
913, 914, 1012, 1270, 1271

FLOTATION
96, 240, 387, 998, 1267

FLUIDIZED BED
(SEE COAL GASIFICATION)

FLUORESCENCE
(SEE SPECTROMETRY, FLUORESCENCE)

FLUOROMETRY
(SEE SPECTROMETRY, FLUORESCENCE)

FLY ASH
(SEE COAL FLY ASH)

FOOD CHAINS
(SEE ACCUMULATION)

FRACTIONATION
118, 272, 330, 350, 389, 438, 461, 821
914, 1150, 1200

FRESHWATER
24, 30, 95, 155, 164, 174, 191, 213
253, 266, 341, 353, 427, 458, 462, 474
526, 541, 596, 681, 683, 685, 692, 702
722, 723, 738, 757, 761, 781, 816, 854
891, 893, 1044, 1069, 1136, 1137, 1257
1276
SEE ALSO LAKES; RESERVOIRS; RIVERS

FUELS
(SEE PETROLEUM, FUELS)

GAS CHROMATOGRAPHY
(SEE CHROMATOGRAPHY, GAS)

GASES
5, 7, 8, 37, 44, 67, 92, 95, 98, 121
145, 150, 158, 160, 167, 179, 187, 213
222, 225, 239, 251, 257, 264, 271, 272
293, 296, 298, 309, 314, 315, 316, 321
322, 323, 324, 350, 383, 389, 393, 416
432, 433, 441, 464, 465, 466, 469, 484
505, 520, 523, 531, 535, 538, 542, 553
555, 558, 559, 560, 566, 572, 577, 578
597, 600, 601, 602, 604, 612, 623, 625
640, 648, 688, 702, 704, 719, 726, 748
770, 781, 782, 813, 821, 826, 827, 833
852, 853, 876, 882, 884, 889, 893, 897
905, 908, 913, 928, 934, 937, 954, 977
980, 1024, 1045, 1060, 1098, 1105, 1113
1130, 1141, 1201, 1206, 1207, 1221
1223, 1255, 1259, 1260, 1281, 1302

GASIFICATION
(SEE COAL GASIFICATION)

GASOLINE
(SEE PETROLEUM, FUELS)

GASWORKS
(SEE COAL GASIFICATION)

GC
(SEE CHROMATOGRAPHY, GAS)

GENETICS
36, 94, 127, 418, 747, 851, 913, 951
975, 1061, 1153
SEE ALSO MUTAGENIC; PHYSIOLOGY, CELL

GILLS
(SEE PHYSIOLOGY, RESPIRATORY)

GREASE
(SEE PETROLEUM, GREASES)

GROUND WATER
57, 80, 83, 133, 152, 179, 187, 249
270, 297, 317, 323, 363, 585, 620, 834
1188, 1194, 1207

GROWTH
(SEE PHYSIOLOGY, GROWTH-DEVELOPMENT)

HAEMATOLOGY
(SEE PHYSIOLOGY, CARDIOVASCULAR-BLOOD)

HANSCH CORRELATION
(SEE STRUCTURE ACTIVITY)

HATCHING
(SEE PHYSIOLOGY, GROWTH-DEVELOPMENT)

HEALTH
262, 297, 317, 352, 385, 455, 511, 523
692, 765, 767, 783, 818, 819, 822, 823
913, 974, 979, 1199, 1238

HEART
(SEE PHYSIOLOGY, CARDIOVASCULAR-BLOOD)

HEPATIC
(SEE PHYSIOLOGY, RENAL-HEPATIC)

HIGH PERFORMANCE LIQUID CHROMATOGRAPHY
(SEE CHROMATOGRAPHY, LIQUID)

HISTOLOGY
86, 388, 392, 495, 513, 565, 613, 732
734, 757, 841, 842, 956, 1040, 1121
SEE ALSO MICROSCOPY; PATHOLOGY

HORMONES
(SEE PHYSIOLOGY, ENDOCRINE)

HPLC
(SEE CHROMATOGRAPHY, LIQUID)

HYDRASE
967

HYDROGEN-ION-CONCENTRATION
(SEE PH)

HYDROLASES
281

HYDROLYSIS
774, 1044

IN SITU COAL GASIFICATION
(SEE COAL GASIFICATION)

IN SITU OIL SHALE RETORT
(SEE OIL SHALE)

INDICATOR SPECIES
39, 95, 246, 604, 1005, 1006

INDUSTRIAL WASTE TREATMENT
(SEE WASTE TREATMENT, INDUSTRIAL)

INFRARED
(SEE SPECTROMETRY, INFRARED)

INJECTASE
483

INTESTINE
(SEE PHYSIOLOGY, GASTROINTESTINAL)

ION EXCHANGE
6, 69, 162, 213, 272, 406, 427, 482
746, 836, 930, 949, 1127, 1142

ION EXCHANGE CHROMATOGRAPHY
(SEE CHROMATOGRAPHY, ION EXCHANGE)

IR
(SEE SPECTROMETRY, INFRARED)

ISOTOPE
(SEE RADIOCHEMISTRY)

KEROGEN
4, 272, 273, 274

KEROSINE
(SEE PETROLEUM, FUELS)

KIDNEY
(SEE PHYSIOLOGY, RENAL-HEPATIC)

KINASE
328

KINETICS
61, 117, 181, 217, 218, 230, 260, 261
274, 281, 338, 359, 402, 446, 469, 501
532, 535, 536, 616, 671, 675, 744, 787
815, 832, 843, 855, 860, 944, 950, 951
1005, 1006, 1029, 1077, 1082, 1083
1084, 1085, 1264, 1287, 1295, 1310

LABELING
(SEE RADIOCHEMISTRY)

LACCASE
526, 570

LAGOONING
(SEE WASTE TREATMENT, LAGOONING)

LAKE
93, 174, 283, 364, 383, 390, 489, 494
541, 570, 612, 643, 717, 722, 742, 779
817, 834, 861, 869, 870, 871, 873, 898
948, 1010, 1131, 1136, 1251, 1257, 1258
1276

LARVAE
21, 110, 118, 127, 299, 340, 458, 685
766, 987, 1034, 1090, 1092, 1169, 1171
1276, 1277

LC
(SEE CHROMATOGRAPHY, LIQUID)

LEACH
187, 546, 833

LETHALITY
(SEE SURVIVAL)

LEUKOCYTE
(SEE PHYSIOLOGY, CARDIOVASCULAR-BLOOD)

LIFE CYCLES
829, 1277

LIMNOLOGY
(SEE LAKE)

LIPIDS
(SEE BIOCHEMISTRY, LIPID)

LIQUID CHROMATOGRAPHY
(SEE CHROMATOGRAPHY, LIQUID)

LIVER
(SEE PHYSIOLOGY, RENAL-HEPATIC)

LYASE
327, 1037

MARINE
21, 27, 39, 62, 90, 95, 108, 110, 119
120, 146, 185, 198, 208, 219, 223, 242
249, 266, 293, 325, 330, 336, 351, 371
474, 487, 488, 490, 491, 492, 526, 546
556, 562, 600, 717, 718, 728, 729, 740
743, 744, 765, 779, 780, 818, 827, 839
876, 883, 915, 928, 947, 957, 966, 967
974, 994, 1010, 1011, 1034, 1047, 1054
1062, 1064, 1103, 1106, 1107, 1132
1137, 1169, 1252, 1253, 1259, 1273
1300, 1301, 1309

MASS SPECTROMETRY
(SEE SPECTROMETRY, MASS)

MATHEMATICAL MODELS
(SEE MODELS)

METABOLISM
(SEE BIOCHEMISTRY, METABOLISM)

MICROBIOLOGY
2, 11, 12, 13, 23, 72, 73, 79, 91, 94
99, 100, 115, 120, 170, 181, 183, 185
186, 204, 205, 206, 207, 208, 224, 228
230, 238, 249, 250, 269, 276, 277, 278
282, 287, 288, 289, 291, 308, 312, 327
328, 329, 330, 331, 335, 344, 345, 346
351, 354, 365, 381, 408, 410, 413, 414
416, 417, 418, 419, 420, 430, 431, 444
450, 451, 452, 462, 463, 467, 470, 486
490, 504, 509, 514, 529, 533, 534, 535
536, 540, 552, 557, 559, 564, 570, 574
582, 605, 613, 626, 627, 638, 642, 645
672, 673, 683, 712, 714, 719, 722, 723
728, 729, 742, 744, 755, 759, 762, 763
764, 775, 780, 800, 804, 828, 832, 845
847, 855, 879, 883, 886, 887, 895, 909
910, 911, 916, 919, 922, 923, 924, 925
926, 943, 944, 945, 946, 962, 963, 964
976, 979, 989, 995, 1005, 1006, 1007
1008, 1010, 1011, 1027, 1033, 1037
1043, 1048, 1049, 1055, 1056, 1057
1062, 1064, 1065, 1066, 1084, 1085
1086, 1096, 1100, 1101, 1102, 1103
1108, 1111, 1112, 1122, 1123, 1124
1126, 1132, 1133, 1145, 1157, 1158
1168, 1172, 1175, 1179, 1185, 1210
1214, 1228, 1232, 1252, 1253, 1254
1257, 1258, 1262, 1263, 1264, 1287
1297, 1300, 1303, 1304, 1305, 1307
SEE ALSO TAXA INDEX FOR SPECIFIC GROUPS

MICROCOSM
1277

MICROFLORA
(SEE MICROBIOLOGY)

MICROORGANISM
(SEE MICROBIOLOGY)

MICROSCOPY
154, 388, 895, 914, 1007, 1008, 1012
1132, 1141, 1286
SEE ALSO HISTOPATHOLOGY

MINING
138, 427, 545, 735, 998, 1108, 1267

MODELS
149, 187, 217, 218, 224, 284, 410, 462
489, 535, 571, 580, 617, 723, 744, 765
766, 767, 815, 843, 914, 1005, 1006
1044, 1085, 1126, 1141, 1165, 1236
1310

MONITORING
47, 122, 134, 154, 162, 177, 285, 324
357, 425, 483, 524, 578, 592, 758, 827
834, 878, 947, 986, 1038, 1044, 1106
1242, 1288

MORTALITY
(SEE SURVIVAL)

MOTILITY
154, 315, 353, 380, 1050, 1144, 1300

MUTAGENIC
12, 36, 127, 170, 280, 398, 409, 411
416, 457, 709, 757, 851, 895, 913, 975
1001, 1116, 1219, 1296

MYCELIUM
570

NEUROLOGY
(SEE PHYSIOLOGY, NERVE)

NMR
(SEE SPECTROMETRY, NMR)

NUCLEAR MAGNETIC RESONANCE
(SEE SPECTROMETRY, NMR)

NUCLEOTIDASE
1150

NUCLEOTIDES
(SEE BIOCHEMISTRY, NUCLEOTIDE)

NUTRIENTS
455, 489, 587, 680, 1205, 1258, 1293
1304, 1307

ODOR
(SEE ORGANOLEPTIC)

OIL
(SEE PETROLEUM, OIL)

OIL SHALE
4, 37, 38, 82, 272, 273, 274, 348, 389
398, 493, 523, 544, 545, 753, 821, 835
857, 858, 913, 914, 984, 1134, 1177
1178, 1238, 1239, 1240

OIL SPILLS
(SEE PETROLEUM, POLLUTION)

OPERATING-COSTS
(SEE ECONOMICS)

ORGANIC MATTER
9, 14, 51, 52, 55, 67, 87, 109, 121
152, 158, 174, 187, 213, 219, 225, 229
234, 237, 238, 251, 258, 264, 284, 296
306, 314, 323, 334, 342, 357, 358, 360
361, 368, 383, 389, 397, 401, 422, 423
441, 465, 470, 474, 479, 498, 511, 520
521, 522, 523, 525, 529, 532, 538, 539
554, 560, 572, 573, 577, 578, 587, 593
597, 601, 602, 613, 623, 642, 654, 655
671, 711, 725, 729, 742, 752, 757, 767
781, 790, 798, 817, 825, 826, 827, 829
834, 852, 862, 878, 893, 917, 928, 929
930, 952, 953, 954, 955, 968, 974, 977
1022, 1026, 1045, 1046, 1057, 1058
1076, 1089, 1116, 1118, 1119, 1127
1166, 1182, 1198, 1201, 1221, 1229
1235, 1244, 1247, 1271, 1278, 1297
1299, 1304, 1305, 1306

ORGANOLEPTIC
46, 363, 392, 393, 395, 396, 397, 642
670, 752, 874, 877, 893, 915, 1146
1188, 1194, 1238, 1273

OVARY
(SEE PHYSIOLOGY, REPRODUCTIVE)

OXIDASE
193, 400, 526, 562, 911, 957, 1152

OXIDATION
9, 18, 22, 31, 41, 51, 52, 53, 65, 84
85, 103, 113, 114, 117, 150, 168, 181
185, 195, 199, 206, 247, 248, 254, 258
260, 261, 272, 278, 280, 286, 287, 288
290, 293, 313, 320, 333, 335, 338, 344
359, 364, 366, 370, 381, 390, 395, 398
402, 405, 409, 410, 411, 412, 413, 414
416, 417, 418, 419, 420, 421, 422, 427
430, 431, 443, 446, 449, 471, 475, 477
490, 497, 498, 499, 506, 514, 526, 527
534, 536, 540, 557, 559, 563, 579, 581
583, 592, 593, 605, 613, 615, 616, 617
624, 626, 628, 638, 642, 646, 651, 670
671, 674, 675, 676, 677, 695, 698, 699
700, 706, 712, 721, 730, 755, 777, 778
786, 787, 788, 790, 810, 814, 838, 844
846, 860, 861, 909, 911, 918, 923, 926
943, 944, 945, 946, 961, 962, 970, 981
982, 983, 992, 1001, 1002, 1007, 1008
1011, 1013, 1026, 1030, 1033, 1048
1056, 1069, 1070, 1076, 1077, 1082
1083, 1093, 1106, 1109, 1115, 1116
1117, 1119, 1125, 1132, 1140, 1148
1156, 1161, 1162, 1166, 1168, 1179
1189, 1197, 1203, 1204, 1205, 1233
1234, 1244, 1248, 1249, 1257, 1258
1266, 1276, 1288, 1291, 1298, 1305
1306, 1307

OXIDOREDUCTASES
70, 202, 755, 1000, 1007, 1008

OXYGEN-CONSUMPTION
(SEE BIOCHEMICAL OXYGEN DEMAND)

OXYGENASE
15, 16, 183, 215, 216, 277, 278, 312
409, 490, 755, 1001, 1007, 1008, 1011
1032, 1122, 1185, 1249

OZONATION
(SEE WASTE TREATMENT, OZONATION)

PAPER CHROMATOGRAPHY
(SEE CHROMATOGRAPHY, PAPER)

PARTICLE SIZE
823, 914, 1012, 1310

PARTITION COEFFICIENTS
192, 850

PATHOLOGY
627, 734, 1091, 1121
SEE ALSO CARCINOGENIC; HISTOLOGY;
MUTAGENIC

PERMISSIBLE EXPOSURE
50, 153, 397, 478, 716, 837, 864, 865
866, 867, 868, 869, 870, 871, 872, 873
894, 940, 987, 1072, 1239

PETROLEUM, GENERAL
39, 58, 90, 112, 118, 126, 133, 148
157, 170, 179, 190, 242, 245, 246, 293

311, 333, 367, 395, 397, 409, 416, 417
418, 425, 482, 491, 519, 548, 560, 572
581, 586, 626, 668, 669, 695, 698, 712
726, 739, 741, 742, 743, 744, 755, 756
770, 800, 816, 840, 877, 883, 903, 904
914, 915, 917, 918, 947, 948, 998, 1031
1042, 1088, 1089, 1106, 1107, 1132
1216, 1218, 1230, 1251, 1252, 1253
1261, 1273, 1277, 1301, 1303

PETROLEUM, FUELS
12, 38, 90, 118, 121, 122, 148, 179
266, 274, 275, 298, 302, 330, 367, 371
397, 474, 484, 523, 545, 563, 738, 1042
1050, 1108, 1141, 1147, 1177, 1178
1283, 1284

PETROLEUM, GREASES
295, 364, 390, 824

PETROLEUM, INDUSTRY
126, 311, 314, 333, 397, 398, 416, 417
425, 455, 519, 560, 600, 738, 742, 743
744, 800, 816, 824, 843, 914, 929, 969
973, 998, 1004, 1005, 1006, 1026, 1088
1216, 1218, 1254, 1277, 1311

PETROLEUM, OIL
38, 39, 48, 58, 60, 82, 90, 111, 138
157, 162, 164, 167, 185, 194, 198, 208
246, 265, 272, 273, 274, 275, 293, 295
302, 314, 323, 330, 333, 340, 348, 364
389, 390, 398, 413, 418, 464, 469, 493
523, 544, 545, 596, 606, 610, 619, 712
713, 726, 738, 742, 743, 744, 753, 764
824, 840, 843, 845, 853, 874, 875, 877
893, 896, 914, 922, 939, 973, 984, 998
1004, 1005, 1006, 1011, 1016, 1027
1042, 1080, 1081, 1105, 1120, 1128
1135, 1136, 1137, 1138, 1169, 1171
1202, 1207, 1230, 1239, 1253, 1274
1275, 1283, 1284, 1293, 1311

PETROLEUM, POLLUTION
39, 164, 185, 242, 246, 330, 413, 596
742, 743, 744, 845, 853, 922, 947, 998
1011, 1254, 1277

PH
21, 38, 70, 134, 265, 281, 305, 315
368, 417, 438, 520, 526, 528, 534, 680
746, 754, 800, 939, 950, 979, 996, 1026
1029, 1044, 1108, 1114, 1202, 1221
1263, 1264, 1276, 1277, 1286, 1304
1306, 1307, 1310
SEE ALSO ACIDITY; ALKALINITY

PHOSPHATASE
1150

PHOTOCHEMICAL
(SEE PHYSIOCHEMICAL)

PHOTOLYSIS
(SEE PHYSIOCHEMICAL)

PHOTOSYNTHESIS
282, 437, 541, 679, 978, 1136, 1138
1230

PHYSIOCHEMICAL
63, 200, 262, 385, 428, 474, 476, 491
497, 584, 613, 616, 674, 689, 766, 815
823, 1240

PHYSIOLOGY, GENERAL
7, 33, 74, 75, 120, 197, 242, 315, 398
399, 425, 436, 693, 695, 721, 728, 736
761, 842, 1032, 1091, 1092, 1121, 1136
1169, 1230, 1273, 1277

PHYSIOLOGY, CARDIOVASCULAR-BLOOD
74, 75, 105, 153, 167, 242, 388, 436
473, 551, 565, 694, 733, 737, 739, 740
761, 842, 920, 950, 956, 1034, 1121

PHYSIOLOGY, CELL
15, 16, 17, 19, 70, 94, 119, 162, 182
185, 202, 215, 216, 241, 296, 300, 301
331, 372, 388, 407, 411, 457, 527, 535
536, 562, 605, 622, 650, 743, 957, 960
965, 967, 1000, 1049, 1050, 1056, 1122
1135, 1143, 1147, 1150, 1152, 1181
1185, 1285, 1286, 1291
SEE ALSO BIOCHEMISTRY; CARCINOGENIC;
GENETICS; MUTAGENIC

PHYSIOLOGY, ENDOCRINE
237, 383, 562, 631, 739, 743, 806, 809
929, 1058, 1152, 1184

PHYSIOLOGY, GASTROINTESTINAL
398, 562, 631, 633, 650, 739, 996
1296

PHYSIOLOGY, GROWTH-DEVELOPMENT
12, 21, 30, 60, 110, 118, 125, 127
131, 139, 146, 185, 204, 219, 224, 258
280, 283, 293, 294, 299, 315, 328, 329
330, 331, 340, 386, 399, 413, 417, 437
455, 458, 470, 503, 535, 536, 570, 574
596, 644, 668, 681, 685, 699, 706, 723
734, 754, 762, 766, 793, 802, 804, 829
855, 943, 945, 987, 993, 1006, 1032
1034, 1037, 1049, 1050, 1055, 1056
1090, 1092, 1094, 1108, 1112, 1135
1136, 1137, 1153, 1155, 1169, 1170
1171, 1175, 1184, 1210, 1246, 1276
1277, 1278, 1283, 1287

PHYSIOLOGY, NERVE
24, 74, 473, 716, 774, 805, 806, 809

PHYSIOLOGY, RENAL-HEPATIC
15, 16, 17, 18, 19, 36, 105, 129, 162
263, 296, 457, 473, 562, 630, 631, 632
633, 715, 734, 739, 740, 761, 783, 842
918, 947, 950, 951, 956, 966, 967, 992
1029, 1150, 1152, 1273, 1305, 1306

PHYSIOLOGY, REPRODUCTIVE
21, 112, 127, 237, 378, 383, 399, 437
644, 743, 754, 818, 1058, 1152, 1170

PHYSIOLOGY, RESPIRATORY
64, 77, 105, 144, 164, 242, 294, 388
437, 473, 733, 740, 842, 891, 950, 1024
1037, 1050, 1121, 1169

PILOT PLANTS
9, 96, 243, 949, 955, 979, 1307

PLASMIDS
66, 416, 471, 1249

PONDS
(SEE LAKE)

POOLS
(SEE LAKE)

POPULATIONS
34, 204, 504, 525, 752, 976, 1131
1202, 1237, 1276, 1277

POTABLE
(SEE DRINKING WATER)

POTENTIOMETRY
(SEE ELECTROCHEMISTRY)

PRIMARY PRODUCTIVITY
330, 681

PROTEINASE
646

PROTEINS
(SEE BIOCHEMISTRY, PROTEIN)

PUBLIC HEALTH
(SEE HEALTH)

PULPMILLS
174, 292, 350, 538, 539, 1005, 1144

PURIFICATION
(SEE WASTE TREATMENT, GENERAL)

QUALITATIVE ANALYSIS
(SEE ANALYTICAL METHODS)

QUANTITATIVE ANALYSIS
(SEE ANALYTICAL METHODS)

RADIATION
(SEE RADIOCHEMISTRY)

RADIOCHEMISTRY
84, 85, 162, 248, 254, 368, 493, 497
629, 676, 689, 739, 740, 742, 744, 751
823, 1014, 1017, 1143, 1253, 1260, 1305

REACTION KINETICS
273, 402, 536, 593, 823, 1026

RECLAMATION
81, 929

REDUCTASE
16, 193, 328, 951, 999

REFINERIES
(SEE PETROLEUM, INDUSTRY)

REPRODUCTION
(SEE PHYSIOLOGY, REPRODUCTIVE)

RESERVOIR
107, 142, 153, 357, 403, 404, 474, 476
494, 549, 550, 684, 687, 695, 940, 1014
1074, 1075, 1089, 1109, 1158, 1159
1186, 1238, 1239, 1314

RESIDUES
32, 33, 37, 93, 238, 272, 360, 361
389, 438, 560, 827, 895, 913, 914, 955
974, 1165, 1256, 1302
SEE ALSO EFFLUENTS; WATER QUALITY

RESPIRATION
(SEE PHYSIOLOGY, RESPIRATORY)

REVERSE OSMOSIS
296, 427, 1023

REVIEWS
2, 3, 21, 35, 110, 152, 162, 176, 226
249, 265, 271, 278, 285, 307, 315, 349
375, 407, 414, 415, 425, 460, 482, 485
495, 507, 511, 515, 520, 528, 545, 554
610, 619, 669, 686, 755, 757, 811, 812
854, 939, 974, 979, 1007, 1008, 1028
1079, 1105, 1127, 1154, 1176, 1211
1214, 1230, 1239, 1291, 1307

RIVERS
4, 37, 80, 82, 83, 96, 102, 149, 168
236, 272, 273, 274, 292, 302, 334, 335
350, 351, 363, 389, 391, 392, 393, 434

479, 480, 521, 522, 541, 556, 572, 580
586, 593, 623, 642, 644, 681, 697, 704
705, 742, 756, 768, 769, 770, 813, 816
833, 848, 859, 919, 929, 930, 931, 949
955, 969, 1012, 1041, 1046, 1057, 1069
1131, 1149, 1152, 1188, 1201, 1255
1272, 1282, 1291, 1311

SAFETY
(SEE HEALTH)

SALINITY
336, 737

SALT WATER
(SEE MARINE)

SANITARY LANDFILLS
(SEE WASTE TREATMENT, SOLIDS)

SAPROBIC
685, 1297

SAPROPHYTE
(SEE SAPROBIC)

SCRUBBERS
5, 9, 156, 525, 1050

SEASONAL
556, 744, 1258

SEAWATER
(SEE MARINE)

SEDIMENTS
39, 117, 180, 223, 284, 302, 325, 348
364, 390, 441, 452, 475, 546, 549, 556
600, 620, 643, 681, 742, 823, 876, 898
914, 979, 1012, 1251, 1258, 1266, 1310

SEEPAGE
(SEE LEACH)

SEM
(SEE MICROSCOPY)

SEPARATION
48, 68, 123, 141, 182, 189, 222, 237
257, 311, 316, 333, 337, 350, 363, 388
389, 427, 439, 461, 516, 517, 572, 583
621, 622, 749, 753, 781, 908, 913, 914
937, 964, 1012, 1023, 1067, 1133, 1190
1204, 1227, 1302

SEPHADEX
(SEE CHROMATOGRAPHY, LIQUID)

SEROLOGY
(SEE PHYSIOLOGY, CARDIOVASCULAR-BLOOD)

SEWAGE
(SEE WASTE TREATMENT, SEWAGE)

SEX
(SEE PHYSIOLOGY, REPRODUCTIVE)

SHALE OIL
(SEE OIL SHALE)

SHALE TARS
(SEE OIL SHALE)

SILT
302, 475, 549, 979

SIMULATION MODELS
(SEE MODELS)

SLUDGE
(SEE WASTE TREATMENT, SLUDGE)

SOIL
12, 57, 60, 72, 100, 108, 110, 117
124, 206, 278, 287, 288, 289, 290, 345
354, 413, 418, 455, 467, 470, 509, 534
547, 712, 713, 759, 762, 766, 775, 919
926, 964, 997, 1027, 1071, 1072, 1073
1079, 1100, 1101, 1112, 1122, 1133
1232, 1252, 1262, 1263, 1282

SOIL MICROBIOLOGY
(SEE SOIL)

SOLID WASTES
(SEE WASTE TREATMENT, SOLIDS)

SOLUBILITY
37, 61, 85, 97, 104, 167, 178, 180
185, 189, 222, 227, 248, 272, 300, 333
336, 388, 396, 422, 426, 432, 433, 446
455, 467, 482, 532, 535, 536, 553, 573
581, 618, 621, 622, 647, 653, 655, 656
657, 658, 659, 661, 663, 664, 665, 666
667, 671, 674, 675, 677, 686, 689, 696
708, 751, 765, 777, 786, 787, 788, 810
815, 822, 823, 860, 934, 939, 952, 953
954, 961, 977, 983, 1002, 1013, 1016
1042, 1051, 1053, 1054, 1080, 1081
1082, 1083, 1113, 1166, 1169, 1189
1197, 1203, 1224, 1233, 1272, 1283
1307, 1310

SOLVENT
55, 58, 89, 96, 210, 246, 267, 272
273, 314, 333, 427, 438, 461, 607, 610
611, 654, 657, 658, 659, 660, 661, 664
665, 671, 691, 711, 823, 835, 856, 857
858, 859, 955, 1012, 1123, 1178

SOLVENT REFINED COAL

(SEE COAL LIQUEFACTION)

SORPTION
96, 98, 121, 163, 169, 187, 213, 246
263, 314, 362, 385, 388, 406, 407, 432
433, 510, 529, 578, 585, 613, 618, 623
630, 632, 634, 647, 725, 742, 743, 749
834, 846, 901, 914, 949, 1022, 1052
1053, 1127, 1141, 1181, 1189, 1197
1203, 1229, 1310
SEE ALSO WASTE TREATMENT, CARBON
FILTRATION

SPECTROMETRY, GENERAL
16, 37, 98, 106, 121, 145, 158, 159
162, 169, 188, 196, 251, 272, 284, 293
296, 309, 314, 323, 350, 382, 383, 389
393, 410, 411, 416, 417, 441, 464, 505
517, 520, 527, 538, 572, 576, 577, 601
602, 607, 612, 619, 623, 634, 704, 726
727, 730, 784, 813, 821, 826, 863, 878
951, 977, 985, 986, 1001, 1036, 1043
1045, 1051, 1052, 1054, 1105, 1110
1185, 1201, 1251, 1259

SPECTROMETRY, EMISSION
389, 914, 1051

SPECTROMETRY, FLUORESCENCE
10, 15, 63, 98, 162, 324, 389, 726
1051, 1052, 1053, 1054, 1110, 1251

SPECTROMETRY, INFRARED
37, 251, 293, 310, 385, 441, 505, 619
730, 791, 821, 1043, 1105

SPECTROMETRY, MASS
145, 251, 272, 296, 314, 323, 383, 416
441, 572, 573, 577, 601, 602, 612, 623
704, 813, 821, 826, 977, 1045, 1259

SPECTROMETRY, NMR
82, 310, 410, 411, 821

SPECTROMETRY, ULTRAVIOLET
32, 104, 163, 250, 255, 281, 382, 464
619, 634, 726, 878, 986, 1053, 1069
1110, 1196, 1201, 1305, 1306

SPECTROPHOTOMETRY
(SEE SPECTROMETRY)

SPILLS
39, 148, 164, 246, 317, 596, 742, 845
853, 922

SRC PROCESS
(SEE COAL LIQUEFACTION)

STANDARDS
48, 56, 187, 223, 262, 265, 285, 295
402, 489, 543, 819, 822, 865, 866, 867
868, 869, 870, 871, 872, 1079, 1196
1239, 1291
SEE ALSO CRITERIA

STATISTICS
285, 752, 822, 893, 1165

STEROIDS
(SEE PHYSIOLOGY, ENDOCRINE)

STOMACH
(SEE PHYSIOLOGY, GASTROINTESTINAL)

STREAMS
(SEE RIVERS)

STRIP MINING
(SEE MINING)

STRUCTURE ACTIVITY
192, 482, 503, 1114, 1236

SUBBITUMINOUS
(SEE COAL)

SURFACE MINING
(SEE MINING)

SURFACE-WATERS
(SEE FRESHWATER)

SURFACTANTS
21, 265, 309, 461, 519, 554, 669, 698
1119, 1165, 1236, 1275, 1303

SURVIVAL
24, 26, 28, 29, 30, 40, 90, 111, 134
165, 172, 173, 184, 191, 242, 314, 343
377, 436, 440, 458, 511, 589, 590, 644
716, 736, 737, 738, 754, 768, 798, 806
809, 816, 817, 824, 829, 831, 840, 841
842, 851, 941, 975, 1021, 1059, 1104
1169, 1202, 1221, 1267, 1275, 1277
SEE ALSO TOXICOLOGY

SYMPOSIA
(SEE REVIEWS)

SYNERGISM
1182

SYNTHANE PROCESS
(SEE COAL GASIFICATION)

SYNTHASE
327

SYNTHETASE
1228

SYNTHOIL-PROCESS
(SEE COAL LIQUEFACTION)

TAINT
(SEE ORGANOLEPTIC)

TAR SANDS
37, 82, 273, 690

TASTE
(SEE ORGANOLEPTIC)

TEM
(SEE MICROSCOPY)

TEMPERATURE
25, 30, 59, 95, 170, 241, 253, 272
273, 275, 295, 315, 470, 482, 536, 556
593, 604, 642, 696, 752, 798, 800, 824
831, 843. 848, 860, 921, 950, 991, 996
1004, 1005, 1006, 1021, 1053, 1055
1114, 1141, 1237, 1252, 1257, 1258
1276, 1281, 1304, 1306, 1310

TERATOGENIC
458

THIN LAYER CHROMATOGRAPHY
(SEE CHROMATOGRAPHY, THIN LAYER)

TISSUE
(SEE HISTOLOGY)

TISSUE EXTRATION
(SEE ACCUMULATION)

TLC
(SEE CHROMATOGRAPHY, THIN LAYER)

TOLERATION
(SEE ACCLIMATION)

TOXICOLOGY, GENERAL
3, 16, 21, 25, 26, 34, 36, 42, 45, 50
59, 64, 71, 76, 77, 90, 93, 95, 101
105, 110, 111, 116, 118, 122, 127, 132
134, 136, 137, 154, 161, 164, 165, 166
172, 173, 175, 185, 191, 192, 204, 205
217, 218, 220, 221, 232, 233, 240, 248
266, 285, 297, 299, 311, 314, 315, 318
321, 326, 343, 346, 349, 350, 352, 357
373, 374, 375, 376, 379, 380, 385, 388
389, 391, 396, 397, 399, 425, 436, 440
442, 445, 448, 452, 458, 469, 472, 473
474, 478, 492, 508, 511, 513, 529, 537
541, 552, 564, 567, 588, 589, 590, 591
593, 595, 596, 604, 613, 631, 633, 634
637, 645, 650, 652, 668, 670, 672, 673
679, 680, 681, 685, 692, 726, 733, 734
735, 737, 738, 751, 757, 760, 766, 768
769, 772, 773, 774, 780, 797, 799, 801
806, 816, 817, 818, 819, 824, 829, 831
836, 839, 840, 841, 842, 843, 848, 854
865, 866, 867, 868, 872, 891, 895, 900
904, 912, 914, 929, 930, 931, 942, 948
950, 955, 959, 1004, 1005, 1006, 1016
1017, 1034, 1042, 1047, 1050, 1059
1061, 1065, 1068, 1071, 1079, 1103
1104, 1114, 11[illegible]1, 1136, 1138, 1149
1160, 1161, 1163, 1165, 1170, 1171
1182, 1193, 1199, 1211, 1221, 1230
1236, 1238, 1239, 1240, 1241, 1245
1246, 1256, 1267, 1268, 1269, 1272
1273, 1275, 1276, 1278, 1283, 1284
1285, 1300, 1307, 1314
SEE ALSO SURVIVAL

TOXICOLOGY, ACUTE
24, 26, 28, 29, 30, 40, 111, 134, 172
173, 191, 242, 314, 343, 440, 511, 589
590, 816, 817, 824, 831, 840, 841, 842
1104, 1221, 1275

TOXICOLOGY, BIOASSAYS
21, 60, 74, 95, 161, 191, 246, 314
492, 565, 604, 692, 816, 817, 831, 840
1006, 1278

TOXICOLOGY, CHRONIC
165, 377, 436, 511, 644, 736, 737, 754
806, 809, 829, 1277

TRACE CONTAMINANTS
(SEE POLLUTANTS)

TRANSAMINASE
995

TRANSFERASE
328, 967, 1007, 1008, 1150

TREATMENT
(SEE WASTE TREATMENT, GENERAL)

TRITIATED
(SEE RADIOCHEMISTRY)

TRYPSIN
996

TRYPTOPHAN OXYGENASE
(SEE OXYGENASE)

TUMORS
(SEE MUTAGENIC)

TURBIDITY
319, 368, 619, 878, 893

ULTRAVIOLET
(SEE SPECTROMETRY, ULTRAVIOLET)

UNDERGROUND MINING
(SEE MINING)

URINARY
(SEE PHYSIOLOGY, RENAL-HEPATIC)

UV
(SEE SPECTROMETRY, ULTRAVIOLET)

WASTE TREATMENT, GENERAL
1, 5, 6, 8, 9, 12, 20, 22, 43, 46, 49
51, 52, 53, 56, 58, 67, 69, 70, 76, 77
81, 93, 96, 103, 109, 116, 123, 126
134, 138, 150, 178, 182, 188, 190, 195
199, 211, 213, 220, 227, 234, 240, 243
244, 247, 249, 251, 254, 257, 258, 259
267, 268, 271, 281, 282, 296, 305, 306
307, 311, 316, 319, 321, 324, 332, 333
338, 342, 343, 350, 355, 356, 358, 363
366, 367, 369, 384, 387, 388, 394, 396
397, 398, 401, 402, 405, 407, 408, 422
424, 425, 426, 427, 429, 435, 444, 450
451, 452, 453, 454, 456, 459, 460, 470
472, 478, 481, 484, 501, 502, 506, 511
515, 516, 517, 518, 519, 525, 528, 536
538, 539, 541, 544, 552, 558, 559, 560
561, 564, 566, 573, 574, 577, 578, 581
583, 587, 593, 594, 598, 600, 601, 607
608, 610, 611, 613, 617, 648, 649, 662
669, 670, 686, 698, 707, 720, 723, 725
731, 733, 749, 767, 770, 771, 776, 778
782, 789, 790, 792, 794, 811, 812, 816
821, 825, 826, 827, 831, 840, 843, 844
849, 852, 854, 856, 859, 863, 879, 886
893, 894, 901, 902, 903, 906, 907, 908
915, 920, 921, 929, 930, 931, 932, 933
935, 936, 937, 938, 939, 943, 944, 945
949, 955, 958, 959, 960, 963, 968, 969
971, 972, 973, 979, 980, 982, 983, 986
988, 991, 992, 998, 999, 1003, 1004
1005, 1006, 1009, 1012, 1015, 1018
1022, 1023, 1026, 1030, 1031, 1036
1057, 1062, 1063, 1066, 1070, 1081
1084, 1085, 1086, 1088, 1093, 1098
1105, 1119, 1120, 1127, 1130, 1131
1134, 1140, 1141, 1142, 1144, 1145
1156, 1159, 1162, 1165, 1166, 1167
1168, 1174, 1176, 1180, 1183, 1187
1189, 1191, 1192, 1193, 1195, 1197
1198, 1199, 1203, 1204, 1206, 1207
1211, 1212, 1216, 1222, 1227, 1234
1237, 1242, 1247, 1250, 1251, 1255
1258, 1261, 1267, 1269, 1270, 1272
1277, 1278, 1291, 1302, 1304, 1305
1306, 1307, 1310, 1312, 1313
SEE ALSO EFFLUENTS; FILTRATION;
FLOTATION; FLOCCULATION; SORPTION

WASTE TREATMENT, CARBON FILTRATION
96, 244, 362, 427, 618, 642, 647, 725
846, 901, 930, 949, 1127, 1188, 1203
1310
SEE ALSO SORPTION

WASTE TREATMENT, CHLORINATION
13, 42, 229, 243, 251, 269, 302, 333
396, 397, 398, 479, 501, 502, 506, 539
554, 601, 613, 642, 643, 651, 652, 782
848, 1058, 1069, 1070, 1166, 1203, 1235
1238, 1291, 1299, 1302

WASTE TREATMENT, INDUSTRIAL
5, 9, 21, 76, 95, 96, 121, 243, 248
251, 314, 333, 350, 363, 366, 388, 398
402, 425, 427, 506, 508, 521, 593, 604
669, 752, 757, 800, 816, 821, 826, 827
837, 880, 893, 894, 929, 930, 931, 939
949, 979, 998, 1005, 1006, 1026, 1044
1045, 1057, 1066, 1108, 1140, 1165
1166, 1189, 1276, 1291, 1302, 1303
1304, 1307, 1310

WASTE TREATMENT, LAGOONING
350, 401, 538, 886, 899, 1004, 1145
1276, 1277

WASTE TREATMENT, OZONATION
38, 123, 396, 397, 423, 506, 652, 670
792, 1031, 1069, 1070, 1140, 1166, 1203
1305

WASTE TREATMENT, SEWAGE
13, 56, 71, 76, 88, 220, 249, 302, 365
396, 397, 398, 425, 427, 434, 452, 534
557, 620, 642, 670, 695, 770, 771, 789
829, 878, 885, 893, 974, 976, 992, 1015
1022, 1066, 1127, 1140, 1165, 1166
1168, 1195, 1250, 1265, 1278, 1304
1307, 1310

WASTE TREATMENT, SLUDGE
5, 34, 230, 238, 240, 251, 258, 394
408, 427, 450, 451, 552, 564, 569, 720
731, 771, 816, 881, 887, 944, 949, 973
976, 979, 992, 1020, 1066, 1207, 1278
1307

WASTE TREATMENT, SOLIDS
9, 544, 833, 929, 931, 949

WASTEWATER
1, 8, 20, 22, 51, 52, 53, 58, 62, 67
69, 76, 77, 78, 96, 107, 123, 134, 195
211, 213, 227, 243, 247, 251, 254, 267
270, 271, 279, 305, 306, 307, 311, 319
333, 338, 342, 356, 357, 358, 363, 366
369, 389, 394, 405, 424, 426, 429, 435
444, 453, 456, 459, 478, 511, 516, 517
518, 519, 524, 528, 550, 552, 558, 559
577, 583, 593, 594, 601, 617, 648, 649
662, 698, 710, 721, 776, 778, 782, 794
810, 816, 838, 849, 852, 856, 881, 893

894, 897, 902, 906, 907, 932, 933, 935
936, 937, 938, 939, 955, 958, 960, 963
971, 972, 973, 974, 979, 980, 983, 986
988, 998, 1003, 1009, 1015, 1023, 1030
1044, 1066, 1088, 1089, 1093, 1098
1110, 1118, 1119, 1120, 1127, 1130
1134, 1140, 1156, 1163, 1166, 1167
1176, 1180, 1187, 1197, 1199, 1203
1204, 1206, 1216, 1217, 1218, 1222
1227, 1233, 1234, 1243, 1247, 1261
1272, 1278, 1294, 1301

WATER QUALITY
10, 12, 21, 39, 57, 92, 93, 95, 96
106, 109, 110, 120, 121, 141, 151, 154
162, 164, 170, 187, 191, 225, 235, 243
246, 247, 251, 253, 265, 285, 295, 309
310, 314, 315, 330, 350, 363, 388, 395
396, 397, 398, 402, 425, 427, 448, 474
489, 506, 511, 520, 521, 535, 536, 541
544, 573, 604, 669, 680, 681, 697, 702
703, 723, 724, 733, 742, 743, 752, 757
758, 765, 802, 818, 819, 820, 821, 822
823, 826, 827, 829, 837, 854, 880, 889
893, 894, 895, 913, 939, 947, 979, 998
1005, 1006, 1011, 1019, 1044, 1045
1064, 1070, 1114, 1131, 1132, 1154
1165, 1189, 1190, 1191, 1192, 1193
1195, 1199, 1221, 1239, 1254, 1257
1258, 1276, 1277, 1291, 1295, 1303
SEE ALSO EFFLUENTS

WHO
(SEE HEALTH)

X-RAY FLUORESCENCE
(SEE SPECTROMETRY, FLUORESCENCE)

XENOBIOTIC
967

TAXONOMIC INDEX

ABRAMIS
40, 1245

ACANTHODIAPTOMUS
24

ACETOBACTER
450, 1208, 1209

ACHROMOBACTER
183, 205, 230, 450, 800, 1149

ACINETOBACTER
65, 312, 563, 605, 728, 729, 791, 887
1033, 1265

ACIPENSER
1090, 1091, 1092

ACTINOMYCES
712, 941, 1304

AEOLOSOMA
738

AEROMONAS
230

AGMENELLUM
1283

AGROBACTERIUM
534, 1264

ALBURNUS
478

ALCALIGENES
119, 120, 183, 230, 450, 534, 605, 728
729, 791, 800, 999, 1000, 1001, 1033
1132, 1149

ALGAE
146, 219, 232, 233, 282, 294, 330, 341
386, 437, 455, 526, 541, 596, 672, 679
680, 681, 687, 743, 765, 766, 793, 804
843, 894, 960, 978, 1004, 1005, 1006
1135, 1136, 1137, 1138, 1153, 1160
1161, 1162, 1172, 1183, 1184, 1230
1283, 1284
SEE ALSO PHYTOPLANKTON

ALGAE, BLUE-GREEN
282, 341, 793, 1283

ALGAE, DIATOMS
1283

ALGAE, EUGLENIDS
341

ALGAE, GREEN
233, 294, 341, 455, 541, 596, 672, 793
804, 960, 978, 1004, 1005, 1006, 1135
1136, 1137, 1138, 1153, 1160, 1161
1162, 1183, 1184, 1283

ALGAE, RED
146, 386

ALTERNARIA
892

ANABAENA
282, 341, 793

ANABAENOPSIS
282

ANCHOVY
(SEE FISH, ENGRAULIDAE--ANCHOVIES)

ANGUILLA
548, 917, 918, 966

ANNELIDS
21, 30, 39, 374, 595, 685, 738, 1016

ANODONTA
24

ANTITHAMNION
146

AQUATIC PLANTS
93, 587, 723, 724, 894, 1005, 1161
1162, 1290

ARACHNID
25, 26, 28, 1280

ARMILLARIA
570

ARTHROBACTER
114, 346, 728, 731, 832, 1096, 1116
1117, 1122, 1132

ASELLUS
24

ASPERGILLUS
1103, 1126, 1228

AZOTOBACTER
282, 1000

BACILLUS
12, 59, 205, 230, 646, 712, 962, 964
989, 1096, 1262, 1263

BACTERIA

2, 11, 12, 13, 18, 23, 36, 56, 59, 65
66, 70, 71, 72, 73, 79, 91, 114, 115
117, 119, 120, 124, 125, 139, 140, 143
144, 149, 154, 170, 175, 180, 181, 183
185, 193, 200, 201, 202, 205, 206, 208
209, 214, 215, 216, 224, 228, 230, 240
247, 258, 275, 276, 277, 278, 280, 281
282, 287, 288, 289, 290, 291, 293, 302
308, 312, 318, 327, 328, 329, 331, 344
345, 346, 347, 348, 354, 365, 381, 409
410, 411, 412, 413, 416, 417, 418, 419
420, 421, 430, 431, 437, 450, 451, 457
462, 463, 467, 470, 471, 486, 490, 497
498, 503, 504, 509, 514, 525, 527, 529
533, 534, 535, 547, 557, 563, 567, 568
569, 574, 582, 587, 599, 605, 613, 624
626, 627, 628, 638, 645, 646, 672, 673
680, 681, 682, 688, 695, 699, 706, 709
712, 713, 714, 721, 723, 724, 728, 729
731, 755, 762, 763, 764, 775, 780, 783
791, 800, 803, 832, 851, 883, 887, 890
895, 898, 904, 909, 910, 911, 916, 919
920, 922, 923, 924, 925, 926, 927, 941
962, 963, 964, 965, 968, 975, 976, 989
990, 993, 994, 999, 1000, 1001, 1007
1008, 1011, 1027, 1032, 1033, 1043
1049, 1055, 1056, 1057, 1061, 1063
1064, 1094, 1096, 1100, 1101, 1103
1111, 1112, 1115, 1116, 1117, 1119
1122, 1126, 1129, 1132, 1133, 1140
1143, 1145, 1148, 1149, 1157, 1158
1159, 1168, 1175, 1179, 1185, 1202
1203, 1205, 1208, 1209, 1210, 1219
1225, 1228, 1237, 1248, 1249, 1252
1253, 1254, 1257, 1258, 1262, 1263
1264, 1265, 1266, 1278, 1285, 1286
1287, 1293, 1295, 1297, 1300, 1304
1305, 1307, 351

BARYTELPHUSA
891

BASS
(SEE FISH, CENTRARCHIDAE--SUNFISHES)

BEIJERINCKIA
416, 417, 418, 421

BITHYNIA
24

BLEAK
(SEE FISH, CYPRINIDAE--MINNOWS AND CARPS)

BLOODWORM
1259

BLUEGILL
(SEE FISH, CENTRARCHIDAE--SUNFISHES)

BOOPHILUS
1280

BRACHYDANIO
379

BREAM
(SEE FISH, CYPRINIDAE--MINNOWS AND CARPS)

BREVIBACTERIUM
114, 832, 1103

BUFO
(SEE TOADS)

BYTHOTREPHES
24

CALANUS
500

CALLINECTES
562, 739

CAMBARUS
738

CANCER
17, 170, 300, 301, 398, 783, 966, 1034
1073, 1285

CANDIDA
114, 205, 269, 283, 855, 992, 1048
1103, 1116, 1143

CARASSIUS
161, 191, 565, 629, 630, 631, 632, 633
634, 635, 636, 738, 773, 841, 956, 1029
478

CARP
(SEE FISH, CYPRINIDAE--MINNOWS AND CARPS)

CATFISH
(SEE FISH, ICTALURIDAE--FRESHWATER CATFISHES)

CAULOBACTER
883

CHAETOGASTER
30

CHARA
960, 1161

CHIRONOMUS
28, 29, 1276, 1277

CHLAMYDOMONAS
341, 596, 1135, 1136, 1137, 1138

CHLORELLA
294, 341, 541, 596, 672, 793, 978
1153, 1183, 1184

CHROOCOCCUS
793

CILIATES
(SEE PROTOZOA)

CISCO
(SEE COREGONUS)

CITHARICHTHYS
740

CLADOCERAN
(SEE CRUSTACEANS, CLADOCERANS)

CLAMS
(SEE MOLLUSKS, PELECYPODS)

CLARIAS
129

CLOEON
28, 29

CLUPEA
340, 1108, 1169, 1170, 1171

COELAMBUS
29

COLIFORM
56, 170, 247, 457, 503, 587, 763, 851
895, 1140, 1293

CONIOPHORA
570

CORBICULA
132

COREGONUS
996

CORYNEBACTERIUM
114, 346, 599, 709, 1096, 1132, 1219

COSMARIUM
793

CRAB
17, 170, 300, 301, 398, 562, 739, 783
891, 966, 1034, 1073, 1259, 1285

CRAYFISH
738, 818, 891, 1068

CRUSTACEANS
17, 24, 54, 90, 101, 110, 111, 112, 132
170, 300, 301, 314, 343, 353, 398, 472
500, 508, 552, 562, 629, 652, 685, 716
738, 739, 743, 745, 766, 783, 802, 818
824, 839, 864, 891, 894, 899, 966, 1034
1042, 1065, 1068, 1073, 1236, 1259
1275, 1285

CRUSTACEANS, AMPHIPODS
685, 738

CRUSTACEANS, CLADOCERANS
24, 101, 314, 353, 472, 508, 552, 652
716, 738, 745, 766, 818, 824, 864, 894
1065, 1236

CRUSTACEANS, COPEPODS
24, 90, 112, 500

CRUSTACEANS, DECAPODS
17, 54, 111, 132, 170, 300, 301, 398
562, 629, 738, 739, 783, 818, 891, 966
1034, 1042, 1068, 1073, 1259, 1285
110

CRUSTACEANS, ISOPODS
24, 685

CRUSTACEANS, PHYLLOPODS
24

CYPRINUS
86, 122, 373, 391, 436, 472, 629, 692
732, 760, 798

DAPHNIA
24, 101, 314, 353, 472, 508, 552, 652
716, 738, 745, 766, 818, 824, 864, 894
1236

DERO
738

DREISSENA
24

DROSOPHILA
127

DUGESIA
738, 1059

DUNALIELLA
1161, 1162

ECHINODERMS
839, 1259

EEL
(SEE FISH, ANGUILLIDAE--FRESHWATER EELS)

EICHHORNIA
1290

ELODEA
724, 1161, 1162

ENCHYTRAEUS
595

ENGRAULIS
1169

ESCHERICHIA
(SEE COLIFORM)

EUDIAPTOMUS
24

EUPLANARIA
30

EURYTEMORA
112, 500

EURYURUS
318

FATHEAD-MINNOW
(SEE PIMEPHALES)

FISH
7, 15, 16, 17, 18, 19, 32, 33, 40, 54
74, 75, 86, 93, 95, 105, 111, 122, 129
130, 132, 154, 161, 162, 164, 165, 166
170, 172, 173, 178, 191, 197, 217, 218
219, 229, 232, 241, 266, 285, 301, 307
314, 315, 324, 340, 342, 349, 350, 353
373, 375, 376, 377, 378, 379, 380, 383
388, 391, 392, 393, 399, 436, 440, 464
472, 494, 495, 513, 537, 548, 562, 564
565, 578, 587, 588, 589, 590, 591, 604
629, 630, 631, 632, 633, 634, 635, 636
637, 640, 644, 668, 692, 732, 733, 734
735, 736, 737, 738, 740, 754, 760, 761
768, 769, 772, 773, 774, 797, 798, 799
802, 806, 807, 808, 809, 816, 817, 818
829, 831, 840, 841, 842, 848, 854, 869
870, 871, 873, 874, 875, 880, 884, 894
897, 912, 915, 917, 918, 947, 948, 950
951, 956, 957, 959, 966, 967, 996, 1016
1017, 1021, 1024, 1029, 1040, 1042
1067, 1090, 1091, 1092, 1104, 1108
1114, 1121, 1131, 1144, 1150, 1152
1155, 1169, 1170, 1171, 1211, 1221
1223, 1235, 1236, 1245, 1246, 1256
1259, 1267, 1268, 1269, 1273, 1274
1275, 1304, 1309, 473, 478, 805

FISH, ACIPENSERIDAE--STURGEONS
1090, 1091, 1092

FISH, ANGUILLIDAE--FRESHWATER EELS
548, 917, 918, 966

FISH, BOTHIDAE--LEFTEYE FLOUNDERS
740

FISH, CENTRARCHIDAE--SUNFISHES
111, 132, 164, 266, 668, 768, 769, 816
840, 1221

FISH, CHANNIDAE--SNAKEHEADS
129

FISH, CICHLIDAE--CICHLIDS
912

FISH, CLARIIDAE--AIR-BREATHING CATFISHES
129

FISH, CLUPEIDAE--HERRINGS
340, 1108, 1169, 1170, 1171

FISH, COTTIDAE--SCULPINS
740, 966

FISH, CYPRINIDAE--MINNOWS AND CARPS
40, 86, 122, 161, 165, 191, 314, 373
379, 391, 436, 440, 472, 565, 629, 630
631, 632, 633, 634, 635, 636, 692, 732
738, 754, 760, 773, 798, 817, 841, 956
1021, 1029, 1221, 1235, 1245, 478

FISH, CYPRINODONTIDAE--KILLIFISHES
379, 966

FISH, ENGRAULIDAE--ANCHOVIES
912, 1169, 1171

FISH, GOBIIDAE--GOBIES
740

FISH, ICTALURIDAE--FRESHWATER CATFISHES
132, 191, 578

FISH, KUHLIIDAE--KUHLIA
912

FISH, MYXINIDAE--HAGFISHES
966

FISH, PERCIDAE--PERCHES
472

FISH, PLEURONECTIDAE--RIGHTEYE FLOUNDERS
957, 966, 967, 1274

FISH, POECILIIDAE--LIVEBEARERS
217, 218, 266, 377, 378, 472, 806, 807
808, 809, 841, 842, 912, 1155, 805

FISH, RAJIDAE--SKATES
957, 966, 967

FISH, SALMONIDAE--TROUTS
15, 16, 17, 18, 19, 74, 75, 86, 93
132, 164, 172, 173, 191, 229, 241, 353
379, 380, 388, 440, 472, 513, 564, 629
644, 734, 735, 737, 738, 761, 772, 831
848, 950, 951, 959, 996, 1017, 1024
1104, 1121, 1131, 1150, 1152, 1256
1267, 1268, 1269, 478

FISH, SCOMBERIDAE--MACKERELS AND TUNAS
966

FISH, SQUALIDAE--DOGFISH SHARKS
473, 966

FLATWORMS
30, 738, 1059

FLAVOBACTERIUM
228, 230, 331, 450, 563, 582, 883
1103, 1265

FLOUNDER
(SEE FISH, PLEURONECTIDAE--RIGHTEYE
FLOUNDERS)

FROGS
458, 494

FUNDULUS
966

FUNGI
2, 23, 31, 114, 115, 205, 208, 269
276, 283, 346, 462, 463, 464, 510, 529
534, 570, 627, 712, 759, 764, 780, 832
855, 892, 919, 992, 995, 1010, 1011
1047, 1048, 1056, 1061, 1101, 1103
1108, 1116, 1126, 1143, 1181, 1228
1252, 1254, 1304

GAMBUSIA
266, 912

GILLICHTHYS
740

GLIOCLADIUM
1126

GLOSSIPHONIA
30

GOBY
(SEE FISH, GOBIIDAE--GOBIES)

GOLDFISH
(SEE FISH, CYPRINIDAE--MINNOWS AND
CARPS)

GONIOBASIS
184, 738

GONIOTRICHUM
386

GUPPY
(SEE FISH, POECILIIDAE--LIVEBEARERS)

HAEMOPIS
30

HAGFISH
(SEE FISH, MYXINIDAE--HAGFISHES)

HALOSPHAERIA
1103

HELISOMA
132, 738

HELOBDELLA
30

HEMITRIPTERUS
966

HERPOBDELLA
30

HERRING
(SEE FISH, CLUPEIDAE--HERRINGS)

HIRUDINEA
(SEE ANNELIDS)

HOMARUS
966

HUMANS
36, 296, 297, 455, 511, 715, 752, 783
802, 963, 1061, 1071, 1072, 1172, 1189
1193, 1296

HUMICOLA
1103

HYALELLA
738

HYDROGENOMONAS
1287

ICTALURUS
132, 191, 578

INSECT
24, 25, 26, 28, 29, 118, 127, 132, 299
318, 685, 738, 766, 1259, 1276, 1277

JORDANELLA
379

KILLIFISH
(SEE FISH, CYPRINODONTIDAE--KILLIFISHES)

KUHLIA
912

LEBISTES
(SEE POECILIA)

LEECH
(SEE ANNELIDS)

LEPOMIS
132, 738, 816

LIMNOCHARES
28

LOBSTER
562, 629, 966, 1259

LUMBRICULUS
30

LYMNAEA
24, 184

LYNCEUS
24

MACKEREL
(SEE FISH, SCOMBERIDAE--MACKERELS AND TUNAS)

MAMMALS
36, 178, 207, 296, 297, 300, 413, 414
455, 511, 591, 715, 752, 783, 802, 963
1061, 1071, 1072, 1126, 1172, 1189
1193, 1285, 1296

MESOSTOMA
30

METAPENAEUS
54

MICROCOCCUS
114, 450, 563, 910, 911

MICROPTERUS
111, 132, 164, 668, 840, 1221

MILLIPEDES
318

MINNOW
(SEE FISH, CYPRINIDAE--MINNOWS AND CARPS)

MOLLUSKS
24, 132, 148, 184, 242, 245, 324, 326
371, 495, 606, 738, 765, 839, 874, 877
896, 1259, 1282, 1309, 110

MOLLUSKS, GASTROPODS
24, 132, 184, 738

MOLLUSKS, PELECYPODS
24, 132, 148, 242, 245, 324, 326, 371
495, 606, 896, 1259, 1309, 110

MOSQUITO
118, 299, 738, 766

MOSQUITOFISH
(SEE FISH, POECILIIDAE--LIVEBEARERS)

MUSSEL
(SEE MOLLUSKS)

MYCOBACTERIUM
114, 139, 206, 209, 288, 450, 514, 712
755, 1094, 1116, 1117

MYTILUS
242, 245, 324

MYXINE
966

NEMATODES
30

NITELLA
1160, 1161, 1162

NITOCRIS
738

NITROBACTER
1278

NOCARDIA
72, 73, 114, 193, 205, 312, 344, 416
417, 418, 534, 563, 887, 1116, 1117
1157, 1210, 1262, 1263

NOSTOC
793

NOTOMMATA
789

NOTONECTA

132

OLIGOCHAETE
(SEE ANNELIDS)

OLIGOCOTTUS
740

ONCORHYNCHUS
132, 164, 472, 831, 1017, 1024, 1268
1269

OPERCULARIA
789

OPHICEPHALUS
129

OYSTER
110, 1259, 1282

PALAEMONETES
132

PANDALUS
1034

PANULIRUS
562, 629

PARAMECIUM
895, 942, 1225

PEDIASTRUM
793

PENICILLIUM
31, 208, 346, 832, 1108

PERCH
(SEE FISH, PERCIDAE--PERCHES)

PHILODINA
177, 738

PHORMIDIUM
341

PHYSA
24, 184, 738

PHYTOPLANKTON
219, 330, 596, 678, 681, 900, 1104
1293
SEE ALSO ALGAE

PIMEPHALES
314, 817, 1021

PLANKTON
60, 112, 219, 330, 549, 723, 741, 742
743, 898, 899, 1039, 1065, 1172, 1273
SEE ALSO PHYTOPLANKTON; PROTOZOA;
ZOOPLANKTON

PLANORBIS
24

POECILIA
217, 218, 377, 378, 472, 805, 806, 807
808, 809, 841, 842, 912, 1155

POLYCHAETA
(SEE ANNELIDS)

POLYPHEMUS
24

POLYSIPHONIA
386

PROPIONIBACTERIUM
144, 803, 1248

PROTOZOA
240, 341, 724, 765, 789, 895, 942
1225
SEE ALSO ALGAE, EUGLENIDS

PSECTROCLADIUS
28, 29

PSEUDOBACTERIUM
308, 688

PSEUDOMONAS
12, 66, 70, 73, 91, 117, 181, 193, 200
201, 202, 205, 214, 215, 216, 224, 230
247, 278, 280, 281, 291, 308, 327, 328
329, 409, 410, 411, 412, 416, 418, 419
420, 430, 431, 450, 467, 471, 486, 490
527, 533, 535, 557, 563, 567, 568, 582
624, 628, 638, 646, 672, 688, 712, 713
714, 728, 731, 755, 762, 763, 764, 800
887, 909, 920, 921, 924, 925, 926, 927
964, 1000, 1007, 1008, 1027, 1032, 1043
1057, 1111, 1116, 1119, 1143, 1149
1168, 1179, 1185, 1205, 1228, 1249
1265, 1286, 1287, 1295, 1300, 351

PSEUDOPLEURONECTES
957, 966, 967, 1274

PSEUDOPOLYDESMUS
318

RADIX
24

RAJA
966, 967

RANA
458

RHIZOBIUM
547, 993

RHODOSPIRILLUM
282

RHODOTORULA
205, 1103

ROTIFERS
177, 340, 789, 1065

SALMO
132, 241, 379, 380, 388, 564, 629, 738
772, 951, 959, 996, 1121, 1152, 1256
1267, 1269, 478

SALMON
(SEE FISH, SALMONIDAE--TROUTS)

SALMONELLA
18, 36, 457, 587, 1049, 1285

SALVELINUS
132, 644, 848, 1152

SARCINA
450

SCALLOP
874, 877

SCENEDESMUS
341, 455, 793, 804

SCOMBER
966

SCULPIN
(SEE FISH, COTTIDAE--SCULPINS)

SEA-URCHIN
(SEE ECHINODERMS)

SELENASTRUM
1004, 1005, 1006

SERRATIA
247, 1103

SHARK
(SEE FISH, SQUALIDAE--DOGFISH SHARKS)

SHRIMP
54, 110, 111, 132, 1034, 1042, 1259

SIGARA
29

SKATES
(SEE FISH, RAJIDAE--SKATES)

SKELETONEMA
60

SNAIL
(SEE MOLLUSKS, GASTROPODS)

SPHAERIUM
24

SPIRILLUM
154, 1103

SQUALUS
473, 966

STARFISH
1259

STEREUM
570

STOLEPHORUS
912

STREPTOMYCES
1126

STURGEON
(SEE FISH, ACIPENSERIDAE--STURGEONS)

STYLARIA
30, 738

STYLONYCHIA
789

SUNFISH
(SEE FISH, CENTRARCHIDAE--SUNFISHES)

THALASSIOSIRA
1283

TILAPIA
912

TOADS
241, 301

TRICHOSPORON
1103

TROUT
(SEE FISH, SALMONIDAE--TROUTS)

TUBIFEX
30, 738

TUNA
(SEE FISH, SCOMBERIDAE--MACKERELS AND TUNAS)

TURBELLARIA
(SEE FLATWORMS)

TURTLES
301

ULOTHRIX
233

VIBRIO
230, 645

VIRUS
904

VIVIPARUS
24

WHITEFISH
(SEE COREGONUS)

XANTHOMONAS
450, 712

XENOPUS
458

YEAST
283, 464, 510, 529, 534, 764, 780
1011, 1181, 1254, 1304

ZEBRAFISH
(SEE FISH, CYPRINIDAE--MINNOWS AND CARPS)

ZOOGLOEA
205

ZOOPLANKTON
24, 90, 101, 112, 177, 314, 340, 353
472, 500, 508, 552, 652, 716, 738, 743
745, 766, 789, 818, 824, 864, 894, 1065
1236
SEE ALSO PROTOZOA

AUTHOR INDEX

ABASHIN, V. G.
1, 794

ABBOTT B J.
2

ABIGNENTE, ENRICO.
3

ABINDER, A. A.
670

ACHARI, R. G.
4

ACKERMAN, D. G.
5

ACKERMANN G R.
6

ACKMAN R G.
7

ADAM'YAN, R. I.
8

ADAMS, J. W.
9

ADANIN, V. M.
1148

AFANAS'EVA, N.
1107

AFGAN, B K.
10

AFGHAN, BADAR K.
448

AFTRING R P.
11

AGAL'TSOV, A. M.
429

AGERTON, BOBBY M.
12

AHEARN D G.
269

AHERN T P.
1230

AHMED M.
13

AHNOFF, MARTIN.
14

AHOKAS J.
18

AHOKAS J T.
15, 16, 17

AHOKAS, JORMA T.
19

AICHINGER, H.
542

AIZENSHTADT V S.
20

AKESSON B.
21

AKHMETGALEEV, N. M.
227

AKHMETSHINA, F. YA.
1036

AKIBA, REIKO.
588

AKITAKE H.
629, 630, 631, 632, 633, 634

AKITSUNE, KENJI.
22

ALBERS R A.
289

ALBERTSSON A-C.
23

ALBRECHT P.
348

ALBRIGHT L J.
302

ALEEVA, N. N.
1234

ALEKSEEV V A.
24, 25, 26

ALEKSEYEV V A.
28, 29, 30

ALEXANDER M.
486

ALFORD, ANN L.
826

ALHADEFF, EZRA.
1305

ALHADEFF, EZRA S.
1306

ALLEN F R.
602

ALLEN, JAMES EDWARD.
31

ALLEN, JOHN L.
32, 33

ALTON, L. V.
34

ALY, O M.
360, 361

ALY, OSMAN M.
35, 363

AMANGEL'DIN, S. K.
102

AMES B N.
36

AMINOVA, G. KH.
355, 356, 357

AMRIN, K. R.
102

ANDERS D E.
37

ANDERSON E.
121

ANDERSON, G. L.
38

ANDERSON J B.
473

ANDERSON, J. W.
39, 1016

ANDERSON, JACK W.
741, 896

ANDERSON, PETER
363

ANDREEV L V.
1117

ANDREEVA, L.
1066

ANDRES, A. G.
40

ANDROSOVA, E. V.
41

ANON.
42

ANONYMOUS.
43, 44, 45, 46, 47, 48

ANTHONY C.
327, 328, 329

ANTIA, NAVAL J.
219

ANTIPIN B N.
24

ANTONOV, V. N.
49

ANTONOVA, K. N.
51, 52

ANTONOVA, N. E.
53

ANTONOVA V I.
50

ANTONY, P. D.
54

ANUFRIEVA, T. L.
971

APPLEGATE H G.
503

ARMSTRONG, J. G.
1256

ARNOLD S.
473

ARRO, J.
55, 835

ARSENOVA, A. N.
583

ARSHANITS, N. M.
311

ARSHANITSA, N. M.

864, 865, 866, 867, 868, 869, 870, 871
872, 873

ARSOVIC, HANS M.
97

ARTHUR, JOHN W.
817

ARUTYUNYAN, E. S.
61

ASADA Y.
56

ASPINWALL R.
57

ASS, M. I.
58

ATHERTON R M.
921

ATKINSON A.
59

ATKINSON, L. P.
60, 330

ATOVMYAN, E. G.
61

ATTWOOD M M.
498

ATYAKSHEVA, L. F.
123

AUDOUARD, Y.
62

AUDUREAU, JOEL.
63

AUERBACH, S.
64

AUGER, CHRISTIAN.
899

AURICH, H.
65

AUSTEN R A.
66

AUSTERN, BARRY M.
67

AUSTIN, H. F.
1254

AUSTIN N M.
1235

AVERETT, D. R.
68

AVERY, NOYES L.
69

AXCELL B C.
70

AXT G.
71

AZOULAY E.
119, 120

BACCHIN P.
922

BACHA, PATRICIA.
471

BACHOFER R.
72

BADALYAN, M. A.
849

BAGGI G.
73

BAHR T G.
74

BAHR, THOMAS GORDON.
75

BAILEY D E.
399

BAILEY, HOWARD T.
164

BAIRD, R. B.
76, 77

BAKER, C. D.
78, 244

BAKKE T.
839

BAKKER, G.
79

BALAYANTS, G. A.
80

BALOGA, J M.
81

BALOGH, B.
82

BALOGH, FRANTISEK.
456

BALYATINSKAYA, L. N.
691

BANGERT, V.
83

BANSAL K M.
84, 85

BARANOVA L N.
86

BARDWELL, C.
350

BARIKHIN S Y.
1229

BARK, L. S.
87, 88

BARKHATOVA, V. I.
51, 52

BARKLEY, D. J.
89

BARNETT, C J.
90

BARNSLEY E A.
91

BARONKINA, L.
580, 682, 683, 724

BARTHA, R.
293

BARTLE K D.
92

BARTLEY, T. R.
93, 1256

BARTON, RICHARD R.
1305

BARUA P K.
762, 1111

BARUAH J N.
762, 1111

BARZ W.
94

BASU, DIPAK K.
1038

BAT I I.
551

BATTERTON J C.
1283

BATTERTON, JOHN C.
1284

BAUCH, HEINRICH.
97

BAUDIN, G.
98

BAYLOCQ D.
952

BAYLOCQ-QUINAULT D.
953

BAZHINA, N. A.
932

BAZIN H.
120

BEAM, H. W.
99

BEAM, HERBERT W.
100

BEAMER P.
170

BEAUCHAMP, J J.
101, 508

BEHRENS, H. C.
1307

BEIM A M.
1160

BEISEMBAEVA, F. G.
102

BELEVTSEV, A. N.
777, 778

BELEVTZEV, A. N.

103

BELKIN, D. I.
104

BELOUSOV, YU. A.
105

BELVEDERE G.
106

BELYAEV, I. I.
107

BELYAKOVA, T. M.
108

BELYANIN, YU. I.
1134

BEND J.
473

BEND, J R.
562, 957, 966, 967

BENEDEK P.
109

BENIJTS F.
110

BENS E M.
1132

BENTLEY, M.
1255

BENVILLE P E JR.
111

BENVILLE, PETE, JR.
668

BERDUGO V.
112, 500

BERENDEEVA, V. L.
933, 934, 935, 936

BERENTSVEIG, V. V.
113

BEREZIN I V.
114

BERGAN T.
115

BERGER, H.
1270

BERGOLD, ORM.
116

BERNOVSKAYA, N.
117

BERNOVSKAYA, N. A.
617, 838

BERRY, WILLIAM O.
118

BERTRAND J C.
119, 120, 728

BERTSCH W.
121

BESCH W K.
122

BESPAMYATOV, O. K.
123

BESSOU, F.
1311

BETTS P M.
124

BETVINOVA L E.
557

BEVERIDGE E G.
125

BEYCHOK, MILTON R.
126

BHAGAT B P.
127

BHAT J V.
992

BHAT, JANARDHANA V.
892

BHATIA, K.
128

BHATIA, KISHAN.
689

BHATTACHARYA S.
129, 880

BIEGANOWSKA, MARIA
1128

BIEHL, E R.
606

BIEMANN, K.
522

BIINO, LUCIANO.
130

BILAI, V. I.
131

BILLS T D.
132

BISCAN, N. J.
1307

BITKOVA, N. A.
133

BITTER, L. A.
753

BJORNDAL, HAKAN.
134

BLAHA J.
135, 136

BLAHA, JAN.
137

BLAIR A H.
249

BLAYLOCK, J. W.
39

BLAZY, PIERRE.
138

BLEVINS, W. T.
139, 140, 206

BLUM M S.
318

BLUMENTHAL, J. L.
929, 930, 931

BOBOVSKAYA L P.
1161

BOBROV, O. G.
662

BOEHNKE H.
464

BOGATSKII M A.
648

BOGDANOV, M. V.
670

BOLDINA, Z. N.
141, 142

BOLLAG, J -M.
759

BOLLAG, JEAN M.
143

BOLLAG, JEAN-MARC.
276

BOMAN, BENGT.
134

BONARTSEVA, G. A.
144

BONARTSEVA G N.
114

BONELLI E J.
145

BONEY, A. D.
146

BONOLI, LUCIANO.
147

BORIES, GEORGES.
148

BORIGHEM G.
149

BORKOWSKI, BOGDAN.
150

BORNEFF J.
151, 152

BORODIN, K. A.
153

BOULE, PIERRE.
63

BOWDRE J H.
154

BOWLING, T. J.
155

BOWMAN P I.
269

BOWMER K H.
156

BOYLE W C.
1203

BRADACS, LEOPOLD K.
157

BRADLEY, C F.
158

BRADLEY, EUGENE B.
159

BRADWAY D E.
160

BRAMMER, J. D.
118

BRENNIMAN G.
161

BREUSOV, N. G.
1110

BREZONIK P L.
162

BRIDGES B A.
457

BRIDGES J W.
457

BRIEN, S. M.
461

BRINGUIER, J.
212

BRIZOVA E.
163

BROADBENT D A.
193

BROBERG S.
693, 694

BROCK T D.
1257

BROCK, THOMAS D.
1258

BROCKSEN, ROBERT W.
164

BRODERIUS, S J.
165, 644, 754

BRODERIUS, STEVEN JAMES.
166

BRODSKAYA, B. KH.
475

BRODY A W.
167

BROEMELING, LYLE D.
314

BROOKINS, DOUGLAS G.
493

BROOKS, BRIAN W.
168

BROOKSBANK P.
169, 447

BROOKSBANK, PETER.
448

BROWN E R.
170

BROWN S B.
614

BROWN, STEPHEN L.
171

BROWN, VINCENT MAURICE.
172, 173

BROWNLEE, B.
174

BRUCE, A. K.
175

BRUCHAL, TADEUSZ.
176

BRYUKHACHEVA, N. L.
144

BUATOIS J.
731

BUDRIN, K. S.
960

BUGROV, YU. F.
852

BUIKEMA A L JR.

177, 738, 824, 1059

BURBANK N C.
912

BURCHARD, HARRY.
97

BURIEV, S.
1183

BURKS, STERLING L.
314

BURLINGAME, A. L.
82

BURMAZ, NICULINA.
1118, 1119

BURROWS W D.
178

BUSH B.
179, 298

BUTLER R G.
887

BUTTON D K.
180

BUTTRILL, S. E. JR.
977

BUTYAEVA, I. I.
661

BYCHKOV, N. V.
961

CABRIDENC, R.
1058

CAGLAR M A.
181

CAHN R P.
182

CAIN R B.
183, 534, 1262, 1263, 1264

CAIRNS J JR.
177, 184, 738, 824, 1059

CAIRNS V W.
564

CALANDRA J C.
440

CALDER, JOHN A.
185, 336

CALHOUN W F.
184

CALLELY, A. G.
186, 1122, 1145

CAMPBELL, J. H.
187, 834

CAMPBELL, JAMES M.
265

CAMPBELL P.
969

CAMPBELL, P. G.
1311

CAMPBELL W L.
1185

CANELLI E.
188

CAPENTER A.
189

CAPLE R.
652

CAPONE, WANDA.
190

CARDINI, G. E.
419

CARDWELL, RICK D.
191

CARLSON, ARNE E.
613

CARLSON, ROBERT E.
192

CARLSON R M.
652

CARLSON, ROBERT M.
192

CARMONA L G.
76

CARRINGTON E G.
574

CARTER M H.
602

CARTER, MIKE H.
826

CARTER S.
189

CARTWRIGHT N J.
193

CARUSO, S. C.
194

CASALINI, A.
195

CASAPIERI, PETER.
196

CASTELL C H.
197

CASTELLANOS, E.
198

CATCHPOLE, J. R.
199, 258

CATELANI D.
73

CATELANI, DANILO.
200, 201

CATTERALL F A.
202

CAZACEANU, ECATERNIA.
203

CENCI G.
204

CERNAKOVA M.
205

CERNIGLIA, C. E.
206, 207, 208, 209

CERNY, KAREL.
316

CHAIGNEAU, MARCEL.
210

CHALAYA, Z. I.
211

CHALKER B E.
11

CHAMBON, P.
212

CHAMBON-MOUGENOT, R.
212

CHAN, KENNETH K. S.
737

CHANDLER J H JR.
132

CHANG, H -T.
1293

CHANG R C.
235

CHANG, R. C. Y.
213

CHANG R L.
1285

CHAPMAN P J.
214, 215, 216, 527

CHARACKLIS W G.
989

CHAREWIC, W.
461

CHASTAGNIER, MADELEINE.
210

CHASTOV, A. I.
760

CHATTERJEE, A. K.
701

CHEMOVA, N. G.
760

CHEN C W.
217

CHEN C W-C.
218

CHEN, JUH W.
1125

CHENG, JOSEPH Y.
219

CHEREMISINOFF, P N.
220, 1015

CHERKINSKII S N.
221

CHERNICHENKO, I. A.
1079

CHERNOBRIVETS, V. L.
222

CHERNYAKINA, A. F.
1234

CHERNYSHEV, I. S.
435

CHERNYSHEV, V. I.
960

CHERNYSHOV, V. I.
1106

CHERNYSHOVA, N. S.
901, 902

CHERVIN, I. I.
430, 431

CHESLER, S. N.
223

CHI C T.
224, 945

CHIAN, E S K.
225

CHIANG, Y -M.
1293

CHIBA, MONITO.
226

CHIGARENKO, L. S.
358

CHIKIN, YU. M.
227

CHIKIU, SHUMPEI.
861

CHILCOTE, D. D.
525

CHILD J.
228

CHINNOVA, R. F.
872, 873

CHINOY I.
1185

CHIOU C T.
229

CHISTYAKOV, A. N.
41, 449, 981

CHMIELOWSKI J.
230

CHMIELOWSKI, JERZY.
279

CHOI, SHIN HYUB.
231

CHOJER S N.
1112

CHOLNOKY-PFANNKUCHE, K.
232, 233

CHRISTENSON, W. N.
243

CHRISTIANSEN, P.
82

CHRISTMAN, R F.
234

CHRISWELL C D.
235

CHRZANOWSKI, ANDRZEJ.
236

CHU, CHI-HONG.
237

CHU, P -C.
1293

CHUDOBA, JAN.
238

CIAMBELLI, PAOLO.
239

CILLIE G G.
240

CLAEYS, R R.
717

CLARK B R.
523

CLARK, E W.

78, 244

CLARK H F.
241, 301

CLARK R C JR.
242

CLARK, ROBERT C. JR.
245, 246

CLAUSEN, J. F.
5

COBB H D.
921

COBB, HOWELL D.
247

CODY, R. M.
895

COFFMAN L M.
248

COHEN, JESSE M.
67

COLE J A.
249

COLIN, G.
250

COLLIER, TRACY K.
1017

COLLINS, R. P.
251

COLLINSWORTH, WILLIAM LEE.
252

COLOMBI, ANTONIO.
200, 201

COLWELL, R. R.
1055, 1252, 1253, 1254

COMODO N.
478

COMPERE A L.
463

CONDREN, ARTHUR J.
254

CONETTA, A.
255

CONNEY A H.
1285

CONNORS K A.
256

CONRAD J R.
408

COOK, L E.
257

COONEY, J. D.
250

COONEY J J.
462

COOPER, R. L.
87, 199, 258, 259

COOPER, W. J.
225, 264

CORNER E D S.
500

CORNETTE, JIMMY C.
12

COSBY R L.
323

COSTA LOPEZ, J.
260, 261

COTTET J.
262

COTTIGLIA, MAURO.
190

COUGHLIN, ROBERT W.
263

COULSON, DALE M.
1218

COUPEK J.
163

COWEN, W F.
225

COWEN, WILLIAM F.
264

COX G E.
399

COYNE, ROBERT V.
265

CREWS, RICHARD C.
266

CROIX, J. M.
267, 268

CROSBY, D. G.
1060

CROW S A.
269

CSANADY, MIHALY.
270

CUKERZIS, J.
1068

CUKOR, PETER.
271

CULP, J. H.
1307

CUMMINS, J. J.
272, 273, 274

CUNDELL A M.
275

CUNNINGHAM, N. J.
9

CURD, MILTON R.
314

CZAPLICKI, EDWARD J.
143, 276

DABALA, HANNA.
236

DAGLEY S.
277, 278

DAGLEY, STANLEY.
613

DAIGNAULT, LOUIS G.
506

DAL PORTO, D. F.
929, 930, 931

DALTON, R. A.
172

DALY J W.
567

DANCH A.
230

DANCH, ALOJZY.
279

DANSETTE P M.
1285

DARBY, RALPH L.
604

DARRAS, R.
98

DAVEY J F.
280, 281, 411

DAVID K A V.
282

DAVIDOVA, E. G.
283, 1143

DAVIES T R.
240

DAVIS, A.
1141

DAVIS A R.
284

DAVIS, P L.
882

DAVIS, RAYMOND E.
628

DAWSON, G. W.
285

DAWSON, VERDEL K.
799

DAY, DAVID CHARLES.
286

DAY, M B.
169, 447

DE BONT J A.
288, 289

DE BONT, J. A. M.
287, 290

DE GODOY, M. P.
292

DE KLERK, H.
291

DE SIMONE, VINCENZO.
239

DEAN-RAYMOND, D.
293

DEDONDER, A.
294

DEESON, A. F. L.
295

DEGEN L.
922

DEHN, ROBERT L.
1179

DEINZER, M.
296, 1182

DELFINO, J. J.
155, 297, 317

DELL'ACQUA, R.
179, 298

DENISOV, E. T.
1082, 1083

DERSHOWITZ, D. J.
1181

DESAI, SHYAMKANT V.
621, 622

DESIDERI P G.
746, 747

DESMARCHELIER, JAMES M.
299

DEVEREUX T R.
966

DEVLAMINCK, F.
733

DIAMOND L.
241, 300, 301

DICKINSON, JEAN K.
1302

DICKSON, EDWARD M.
544

DIETZ A S.
302

DIETZ, F.
303, 304

DIGGENS, A.
305

DIKUN P P.
86

DINSMORE, G. B.
1057

DINU D.
442

DIWAN, A. D.
891

DIXON, D G.
734, 735

DMITRIEV, M. T.
306

DMITRIEVA, V. N.
972

DOBBS G H.
740

DOBBS, RICHARD A.
67

DOBROLINSKAYA G M.
1115

DOCHERTY, A. C.
307

DOI S.
582

DOLGOVA L G.
308

DOLIDZE, TS. G.
784

DONAHUE, AUDREY E.
309

DONALDSON W T.
310

DONCHENKO, N. A.
311

DONDERO N C.

976

DONOGHUE N A.
312

DOOLITTLE F G.
37, 272

DORE, M.
313

DORIS J.
191

DORRIS, TROY C.
314

DOUDOROFF, PETER.
315

DOUX H J.
119

DOWNS, S. F.
986

DRABBLE W T.
327, 328

DRAHORAD, JOSEF.
316, 908

DRESSMAN, RONALD C.
337

DRURY, DONALD E.
1144

DUBE, D J.
297, 317

DUFFEY S S.
318

DUFFIELD, G A.
319

DUGAN P R.
1266

DUHART, BENJAMIN THOMAS.
320

DULAR, MILAN.
321

DUMONT J N.
1050

DUNCAN, R. M.
322

DUNLAP W J.
323

DUNN, B P.
324, 325, 1301

DUNN, BRUCE P.
326

DUNN N W.
66

DUNSTAN M.
328

DUNSTAN P M.
327, 328

DUNSTAN, PATRICIA M.
329

DUNSTAN, W. M.
60, 330

DURHAM, NORMAN D.
331

DURNOVA, M. S.
1095

DUST J V.
332

DYSZEL, S. M.
223

DZINGOV, ARISTOTEL
941

EARHART, JONATHAN P.
333

EBA, HIROKI.
639

EBERLE S H.
334

ECHEVERRIA T.
340, 1169

ECHEVERRIA, TINA.
1171

EDELINE, F.
335

EGANHOUSE, ROBERT P.
336

EGLINTON G.
348

EGOREICHENKO, O. A.
211

EHRHARDT J P.
898

EICHELBERGER, JAMES W.
337

EIRING, L. V.
338

EITNER, G.
65

EL-DIB, M. A.
339

ELDRIDGE M B.
340, 1169

ELDRIDGE, MAXWELL B.
1171

ELEY, R. L.
489

ELISEEVA, N. M.
711

ELLIS B E.
341

ELSTUB J.
92

EMEL'YANOVA, E. A.
342

EMERY, RICHARD M.
343

ENAGONIO, D. P.
223

ENGEL K O.
1123

ENGEL, KENNETH O.
1126

ENGELHARDT G.
344

ENGELHARDT, GABRIELE.
345

ENGLEHARDT G.
346

ENSIGN, JERALD COLEMAN.
347

ENSMINGER A.
348

EPLER, PIOTR.
349

EPPEL, S. A.
579

ERDMANN D E.
368

ERGOROV N S.
114

ERICKSON, R. E.
350

ERMOLAEV K K.
351

ERSHOVA, K. P.
550

ERUSALIMSKAIA L F.
557

ESSENHIGH, R.
1141

ETA, INC.
352

ETO, SHUKO.
589, 590

EUR INL FISH ADVIS COMM
353

EVANS W C.
354, 775

EVSEEV, A. E.
706

EVSEEVA A E.
699

EVSTIFEEV, M. M.
355, 356, 357, 358

EVSYUKHIN, G. G.
359

FARANT, J -P.
715

FAUST, S D.
360, 361, 362

FAUST, SAMUEL D.
35, 363, 1310

FAY P.
282

FEDORENKO, Z. P.
398, 1296

FEDOSEEVA, G. E.
962, 963, 964

FEHER, Z.
1213

FELDSTEIN, M.
748

FENNEWALD, MICHAEL.
471

FENSTERMACHER P.
473

FERQUSON D R.
982

FERRY J G.
365

FESSENDEN R W.
84, 85

FICKE, HUNTER H.
366

FIECHTER, A.
1048

FIEDLER, F.
345

FIGUEROA, LUIS O.
367

FILIOL, CHRISTIAN.
63

FILIPPOVA, L. K.
954

FILYUKOVA T V.
453

FINKEL'SHEIN Z I.
1117

FINLEY J S.
242

FINLEY, JOHN S.
245, 246

FINNERTY W R.
605, 791, 1033, 1056

FINOGENOV, V. I.
1134

FISHMAN, G. I.
369

FISHMAN M J.
368

FITAK, BOHDAN.
236

FITI, MARIA.
370

FLECKINGER, R.
371

FLECKINGER, ROBERT
148

FLEEKER J R.
124

FLEET, BERNARD.
372

FLEROV, B. A.
373, 374, 375, 376, 377, 378, 772, 808
1155, 1245

FLID, R. M.
359

FLORES W.
1027

FLOYD T L.
602

FOCHT D D.
13, 1100, 1101

FOGELS A.
379

FOLMAR L C.
380

FONTANGES R.
731

FORD, DAVIS L.
425

FOREMAN, DALLAS G.
191

FORNEY, A. J.
833

FORRO, JOHN RICHARD.
381

FOUDA, H.
1060

FOUNTAINE, J. E.
382

FOUTS J R.
966, 967

FOX M E.
383

FRANK, P. A.
1256

FRANT, M. S.
384

FREED V H.
229, 385

FRENZEL, CHARLES A.
159

FRIBERG, T S.
538

FRIEDEL, R. A.
1045

FRIES L.
386

FRIES, WILLIAM.
69

FRITZ J S.
235, 578

FROLOV, L. F.
387

FROMM, P. O.
388

FRUCHTER, J. S.
389

FRY J R.
457

FUENTES F.
1027

FUENTES, R C.
225

FUJIKAWA, SHUZO.
810

FUJISAWA, TOSHIO.
810

FUKAYA, MASAHIRO.
916

FUKETA Y.
1084

FUKIMBARA, TAKASHI.
910, 911

FUKUTO, T. R.
299

FULLER, FREDERIC D.
390

FUNASAKA, RYOZO.
391, 392, 393

FURUKI, MASAKAZU.
394

GABOVICH, R. D.
395, 396, 397, 398

GAEVA, N. N.
1233

GAGARINOVA, L. M.
1227

GALITSKAYA, N. B.
1206

GALLI E.
73

GALLO M A.
399

GAMES L M.
577

GANBAROV, KH. G.
430, 431

GARDINER, DEIRDRE K.
859

GARRETT, BENJAMIN CAYWOOD.
400

GARRISON A W.
602

GARRISON, ARTHUR W.
401

GARRISON, RICHARD L.
402

GARZA, A.
628

GASIOR, S. J.
833

GAUDY, A. F. JR.
444

GAVRILKO, YU. M.
358

GAVRILOVA, L. I.
403, 404

GEARY P J.
70

GEHRS, C. W.
511

GEL'FAND, M. M.
661

GELEVTSEV, A. N.
405

GERDES, WILLIAM HERMAN.
406

GERMAIN J E.
407

GERSTEN, D. M.
175

GHOSH, S.
408, 968

GIBSON, D. T.
207, 280, 409, 410, 411, 412, 413, 567
628, 714

GIBSON, DAVID T.
414, 415, 416, 417, 418, 419, 420, 421

GIBSON G G.
242

GILBERT, E.
422, 423

GIOVANOLI-JAKUBCZAK, TERESA
236

GLAZYRINA, O. I.
424

GLEDHILL W E.
2

GLOYNA, EARNEST F.
541

GLOYNA, ERNEST F.
425

GLUKHOVA, L. V.
864, 865, 866, 867, 868, 869, 870, 871
872, 873

GMUENDER, F.
1048

GODEANU M.
798

GOLBER M B.
426

GOLDSTEIN, D. J.
427

GOLLNICK, KLAUS.
428

GOLOVINA, Z. M.
429

GOLOVLEV E L.
1116

GOLOVLEVA, L. A.
430, 431, 1117

GOLUB, A. I.
432, 433

GOMEZ CRESPO, DANIEL EDUARDO.
434

GOMINGER D.
1042

GONCHARENKO, G. K.
435

GONCHAROV, G. D.
436

GONCHAROVA A V.
437

GONCHAROVA, I. A.
438, 439, 609

GOODE J W.
440

GOODLEY P C.
441

GOODMAN, ALAN.
820

GORDON M.
441

GORETTI G.
442

GORKA, PIOTR.
459, 460

GORODETSKII, I. YA.
443

GOROKHOV, A. A.
662

GORYACHEVA, N. B.
683

GORYACHEVA, N. V.
580, 724

GOSWAMI, S. R.
444

GOTO, TOTARO.
488

GOTTSCHALDT, NORBERT.
445

GOULD, JOSEPH PETER.
446

GOULDEN P D.
169, 447

GOULDEN, PETER D.
448

GOVOROVA, L. M.
449

GRABINSKA-LONIEWSKA A.
450, 451, 452

GRACHEVA, M. P.
453, 454

GRADOVA N B.
1143

GRADY C P L JR.
569

GRAEF, W.
455

GRAF, OTTO.
456

GREEN M H L.
457

GREENHOUSE G.
458

GREENSPAN I.
170

GREGOROWICZ, ZBIGNIEW.
459, 460

GREGORY, J G G.
859

GREINER, G.
1271

GRENNEY, W J.
843, 1004

GRENNEY, WILLIAM J.
1005

GRIEVES, R. B.
461

GRIFFIN M.
312

GRIFFIN W M.
462

GRIFFITH W L.
463

GRIFFITHS, M.
596

GRIGOR'EVA, I.
864, 865, 866, 867, 868, 869, 870, 871

GRIMMER G.
464

GRINSHPUN, V. E.

1097

GROB, K.
465

GROB, R L.
466

GROENEWEGEN D.
467

GROF, O.
468

GRUBER, G. I.
929, 930, 931

GRUENSPAN, M.
1043

GRUIA, E.
469

GRULA, E. A.
470

GRULA, M. M.
470

GRUND, ALAN.
471

GRUSHKO YA M.
472

GSCHWENDT, BRIGITTE.
412

GUARINO A M.
473

GUBERGRITS, M.
117, 474, 475, 476, 617

GUBERGRITS, M. YA.
616

GUDZENKO, V. I.
477

GUERIN M R.
523

GUERRA M.
478

GUERRERO, H.
606

GUESTEN, H.
422, 479, 480

GUIGUES, FREDERIC.
481

GUILBAULT, G. G.
483

GUINCHARD, C.
561

GUMP, B. H.
223

GUO H M.
564

GUREVICH, N. YU.
653

GUSEVA, A. N.
482

GUSHCHINA, L. M.
698

GUTKNECHT, W. F.
483

HABIB, Y H.
220

HACKEMACK, DIETRICH.
484

HAGERBY E.
570

HAGIHARA, KOHICHI.
485

HAINES J R.
486

HAKUTA, TOSHIKATSU.
487, 488

HALAMA D.
205

HALE, J. H.
530

HALL E S.
249

HALL, R. W. JR.
489

HAMADA, SHINICHIRO
855

HAMDI Y A.
547

HAMMER K D.
490

HANADA, KEIZO.
599

HANANO M.
1029

HANCHER, C. W.
525, 1057

HANNUS, M.
475

HANSEN, DAVID J.
492

HANSEN H P.
491

HANSON, RAY L.
493

HANUSKA L.
494

HANYA, TAKAHISA.
813

HAQUE R.
385

HARADA, KATSUHIKO.
495, 496

HARBOUR J R.
497

HARDER W.
498

HARDIN A H.
284

HARKNESS A C.
499

HARPER D B.
1037

HARRIS, J. C.
9

HARRIS R P.
112, 500

HARRISON J E.
1007, 1008

HARRISON R M.
501, 502

HART O O.
240

HARTUNG R.
161

HASEGAWA, MAKOTO
1209

HASS B S.
503

HASSETT A J.
240

HATTRUP, A. R.
93

HAVAS, GEZA.
1107

HAYNES, W. P.
833

HAZDRA J J.
170

HEALY J. B. JR.
504

HECHT H D.
1272

HEGEMAN G D.
1001

HELLEBUST, J.
596

HELLEBUST, J. A.
1135, 1136, 1137, 1138

HELLMANN, HUBERT.
505

HENDRICKSON, THOMAS N.
506

HENKEL H G.
120

HENNEQUIN, CLAUDE.
507

HENSLEY, M.
420

HERBES, S. E.
101, 508, 509, 510, 511

HEREDY, LASZLO ALADAR.
512

HERNANDEZ O.
1285

HEROS M.
898

HERRING C M.
1108

HERSHBERGER, W K.
513, 950, 951

HERTZ, H. S.
223

HEYER J.
514

HIGASHIURA, MUYO.
515, 516, 517, 518

HIGGINS I J.
1037, 1157, 1210

HIGGINS M L.
156

HIGHFILL, J. W.
264

HILL, DAVID W.
401

HILLE, ETELKA.
519

HINRICHS, RICHARD L.
1127

HIRAYAMA, TOSHIHISA.
559

HITES R A.
520, 521, 577

HITES, RONALD A.
522

HO C H.
523

HOCK B.
109

HOESLE C.
334

HOFTON, M.
524

HOLDER, G. M.
1280

HOLLADAY, D. W.
525, 1057

HOLLEYHEAD, R.
4

HOLOMAN, VERNA L.
604

HOLST R W.
526

HOLT, BUFORD R.
171

HOLZER G.
121

HOPPER D J.
214, 527

HORASAWA, ISAMU.
528

HORITSU, H.
529

HORN, J. A.
530

HOROSZKIEWICZ, ZBIGNIEW.
236

HORSPOOL G.
457

HOSHIKA Y.
531

HOTTA, HIROSHI.
532

HOU C T.
533

HOUGHTON C.
183, 534, 1264

HOUSTON C W.
181

HOUSTON, CHESTER W.

535, 536

HOWELL J A.
224, 943, 944, 945

HOWLAND, ROBERT M.
537

HOYER O.
334

HRUTFIORD, B F.
538

HRUTFIORD, BJORN F.
539

HSIEH, JIH-HAN.
540

HSYNG, LIN.
546

HUANG, JU-CHANG.
541

HUBER, J F K.
542

HUDSON J O.
563

HUETHER, C H.
78, 244

HUFF, J E.
543

HUFF, L L.
543

HUGHES, D. E.
186

HUGHES, EVAN E.
544

HUMPHREY A E.
1295

HUMPHREY D W.
1123

HUMPHREY, DAVID W.
1126

HUNDEMANN, AUDREY S.
545

HUNEK, JOZSEF.
1187

HUNG, T -C.
1293

HUNG, TSU-CHANG.
546

HUSSIEN Y A.
547

HUTCHINSON, T. C.
596, 1135, 1136, 1137, 1138

HUTTO, F B, JR.
81

HUTZINGER O.
346

IBERTIS ACUNA, MARIA SOFIA.
434

IKAI T.
919

IKEDA M.
918

IKEDA, MIKIKO.
548

IL'NITSKII, A. P.
549, 550, 1071, 1072, 1074, 1075, 1309

ILICHKINA, A. G.
551, 1186

ILISESCU A.
552

IMAGAWA, HIROSHI.
810

IMAMURA, TAKASHI.
1299

IMANAKA, MASAAKI.
917

IONESCU, MARIOARA.
797

IONESCU-HOMORICEANU, SERBAN I.
973

IONILA D.
798

IORDAN, E. P.
803

ISEYA Z.
874

ISEYA, ZENSUKE.
876, 877

ISHII, T.
554

ISHIKAWA, KIYOSHI.
555

ISHIWATARI, RYOSHI.
813

ISMAILOV, N. M.
430, 431

ISODA, KAZUO.
532

ISWARAN, V.
993

ITAGAKI, YASUHIRO.
393

ITURRIAGA R.
556

IUROVSKAIA E M.
557

IVANENKO, G. S.
558

IVANOVA, L. G.
786, 787, 788

IVANOVA, Z. M.
558

IWAI, SHIGEHISA.
559

IYENGAR M S.
762, 1111

JACOBSON, B S.
560

JACQUEMAIN, R.
561

JAHN L A.
769

JAMES, M O.
562, 957, 967

JAMISON V W.
563

JANK B E.
564

JANSEN, J.
255

JANZEN, S.
565

JANZEN, SHERRY.
956

JEFFREY A M.
567

JENIK, JOSEF.
566

JENKINS R L.
76

JENNINGS, PAUL A.
1127

JERINA D M.
567, 1285

JERINA, DONALD M.
421

JESERNIG, W V.
78, 244

JIGAMI Y.
568, 923

JIGAMI, YOSHIFUMI.
927

JOEL A R.
569

JOHANIDES V.
1168

JOHANSSON M.
570

JOHNSON, B. THOMAS.
571

JOHNSON, J. D.
382

JOHNSON, K. E.
575, 576

JOHNSON, R. J.

JOLLEY, R. L.
572, 573, 1201

JONES, A. M.
186

JONES, ARTHUR R.
820

JONES, G. JR.
573

JONES G L.
574

JONES N.
1265

JONES, PETER F.
575, 576

JORDAN, D. H. M.
173

JOSEFSSON, BJORN.
14

JOSHIPURA, P. B.
382

JUCHAU, M R.
513, 950, 951

JUNGCLAUS G A.
577

JUNK G A.
578

JUONG N T.
898

KABLER, P W.
819

KADAR L.
109

KAISER, M A.
466

KALIBERDO, L. M.
579

KALINICHENKO, L. A.
936

KALINICHENKO L T.
1078

KALLIO R E.
410, 828

KALLIO, REINO E.
419

KALMUTCHI, GEORGE.
863

KALMYCHKOV G V.
1161

KALYUZHNAYA, L. D.
1079

KAMSHILOV, M. M.
580

KANDLER, WILHELM.
157

KANDZAS, P. F.
581

KANEKO Y.
582

KANYGINA, A. V.
583

KAPLAN, LOUIS.
584

KAPLIN, G. I.
585

KAPLIN, V. T.
586

KAPS, T.
835

KARASEVA N N.
587

KARELINA, L. S.
663

KARIYA, TEIJI.
588, 589, 590

KARKI N T.
16, 17

KARKI, NIILO T.
19

KARPENKO, N. N.
579

KARYAKINA, L. N.
654

KASHKOV, V. K.
1233

KASPEROVICH, A.
961

KATO, TAKETOSHI.
591

KATOLIKOVA, S. N.
1030

KATOR, H I.
845

KATZ, S.
592

KATZER, JAMES R.
593

KAUFMAN, K. S.
594

KAUFMAN, Z. S.
595

KAUSS, P.
596

KAWAHARA, FRED K.
597, 598

KAWAI, FUSAKO.
599, 916

KAWAI, SENZO.
801

KAWAKAMI, Y.
600

KAWASHIMA Y.
612

KEITH L.
170

KEITH L H.
601, 602

KELIHER, P. N.
382

KELLER, E. C. JR.
1153

KELLY, JOHN ARTHUR.
603

KEMBALL A.
122

KEMP, HOMER T.
604

KENNEDY R S.
605

KENNER, C T.
606

KEPLINGER M L.
440

KESSICK M A.
989

KHENKINA, L. M.
699, 706

KHESINA A Y.
963

KHESINA, A. YA.
607, 964

KHESINA AIA.
962

KHIR'YANOVA, T. M.
356

KHITROV, N. K.
670

KHLEBNIKOV, O. P.
958

KHODOROV, E. I.
608

KHOKHLOVA, M. M.
58

KHOMENKO, A. N.
438, 439, 609

KIESSER, S. L.
39

KIEZYK, P. R.
610

KIEZYK, PETER R.
611

KIKUCHI T.
612

KILGORE, WENDELL W.
613

KIM, BYUNG R.
1127

KIMBLE B J.
348

KIMURA S.
629, 633, 634, 635, 636

KING, C. JUDSON.
333

KING R F G J.
614

KINOSHITA, SHINICHI.
890

KIPNIS, M. G.
615

KIRA, SHOHEI.
917

KIRICHENKO, G.
788

KIRICHENKO V V.
551

KIRSO, O.
616

KIRSO, U.
475, 476, 617

KIRSO, UUVE.
117

KITAGAWA, HIROSHI.
618

KITAMURA, HIROYUKI.
394

KITAO, TAKANE.
559

KITAZATO, HAJIME.
619

KITROSSKII, N. A.
306

KIVES J J.
1272

KLAIN, N. P.
847

KLAPCINSKA B.
230

KLASS D L.
408

KLECZKOWSKI, A. S.
620

KLEIN, E.
621

KLEIN, ELIAS.
622

KLEOPFER R D.
623

KLERK H D E.
624

KLEVERLAAN, NICO T. M.
625

KLUBKOV, V. G.
550

KNECHT, ALBERT THEODORE, JR.
626

KNOWLES C J.
627

KNUTSON, M. J.
473

KNYAZEVA, G. V.
690

KOBAL, V. M.
412, 628

KOBAYASHI J.
629

KOBAYASHI K.
630, 631, 632, 633, 634, 635, 636

KOBAYASHI, KOSHI.
639

KOBAYASHI, TOSHIO.
637

KOCH J R.
410

KOCHETKOV V.

1249

KOCHETKOVA, T. M.
655

KODAMA K.
638

KODAMA O.
56

KODAMA, TAKENORI.
639, 640, 641

KOELLE, W.
480, 642, 643

KOELLE, WALTER.
1046

KOENST W M.
644

KOESSLER F.
645

KOGAN, L. A.
1227

KOGAN, S. S.
133

KOHNERT R L.
229

KOIDE, KIYOSHI.
856

KOLCHINS'KA I D.
646

KOMORI, MASAKI.
647

KOMSKII M S.
648

KONDRAT'EVA, M. M.
649

KONDRATYUK, V. A.
650

KONGIEL-CHABLO I.
651

KONOVALOV S A.
1143

KONTOGIANNIS, J E.
90

KOPPE P.
303, 304, 642

KOPPERMAN H L.
652

KOPPERMAN, HERBERT L.
192

KORENMAN, I. M.
653, 654, 655, 656

KORENMAN, YA. I.
657, 658, 659, 660, 661, 662, 663, 664
665, 666, 667

KORMENDY A C.
832

KORN S.
111

KORN, SID.
668

KORNIENKO, V. M.
979

KOROLEV, A. A.
669, 670

KORTE, F.
879

KOSHITANI, ZINYA.
671

KOSINKIEWICZ B.
672

KOSLOW, J. R.
194

KOSSLER F.
673

KOSTOVETSKII. YA. I.
1079, 1296

KOSTROMIN, N. P.
674, 675, 676, 677

KOSTYAEV, V. YA.
580, 678, 679, 680, 681, 682, 683

KOTLYAR, S. G.
684

KOTNIK, DUSAN.
321

KOVACHEV, S.
685

KOVAL, E. Z.
131

KOVALENKO, V. I.
435

KOYAMA, AKIRA.
686

KOZAK, PAVEL.
566

KOZHOVA O M.
472, 1161, 1162

KOZITSKAYA, V. N.
687, 1308

KOZUCHOWSKI, JACK.
1038

KOZYREVA L F.
1248

KOZYUKINA ZH T.
688

KRAINOVA, O.
144

KRAMER, URS.
689

KRAVCHENKO, G. V.
104

KREMMER, A. M.
690

KRESHKOV, A. P.
691

KRETOVA, L. G.
283

KRIEG N R.
154

KRIEGER, H. L.
1019

KRISHNA PRASAD, S B S.
692

KRISTOFFERSSON R.
693, 694

KRIVENTSOVA T D.
695

KRIVITS'KII I P.
712

KROLEV, A. A.
550

KRUECKEBERG C.
334

KRUPATKIN, I. L.
696

KRUPITSKAIA I D.
697

KRYATKOVSKII, A. N.
49

KRYATOV, I. A.
698

KRYSHTAB T
699, 706

KRYSHTAB, T. P.
699, 706

KUBOTA M.
56

KUCHMA V N.
308

KUDINOV, B. V.
908

KUDRISH I K.
699

KUHN, A. T.
700

KUKHARENKO, T. A.
615

KUKLINA, M. N.
1314

KULAGINA, T. G.
653

KULAKOV, V. N.
359

KULKARNI, A V.
10

KULSHRESHTHA, H. K.

701

KUNDEL, H.
753

KUNTE H.
702, 703

KUNTE, HELGA.
704

KUO, C. L.
77

KUO, MAU H.
1179

KUO, MING-FU.
705

KUO, P P K.
225

KURAZHSKOVSKAYA, T. N.
40

KURDISH, I. K.
706

KURDYKA, S.
620

KURENNOY, I. L.
396

KURINNOY, I. L.
397

KURINNYI I L.
395

KURINNYY, I. L.
398

KURIYAGAWA F.
707

KURODA, MASAYUKI.
226

KUROWSKI J L.
167

KURZANOVA, V. V.
786, 787

KUTLIEV, D.
1183

KUVANDYKOV, I. SH.
708

KUWAHARA, MASAAKI.
709, 1219

KUZ'MICHEV, E. F.
443

KUZ'MINA, N.
52

KUZNETSOV, E. R.
710

KUZNETSOV, M. D.
710

KUZNETSOV S I.
1014

KUZNETSOV, V.
49

KUZNETSOVA, E. M.
711

KVASNIKOV E I.
646, 712, 713

KVASNIKOV YE I.
1205

KVYATKOVSKII, A. N.
123, 988

KWAPINSKI J B.
170

LA ROCK, P A.
845

LABORDE A L.
714

LABROCHE, C.
267, 268

LABUZEK S.
230

LACKME, C.
267, 268

LADER, JUNE H.
185

LAHAM, S.
715

LAKHNOVA V A.
716

LAKIZA, P. I.
1079

LAMBERTON, J G.
717

LAMONTAGNE, R A.
718

LANDINI M.
746

LANG A R G.
156

LANGLEY, WILLIAM D.
719

LANK, JOHN C. JR.
720

LANSDEN, J. A.
895

LAPTEVA, N. A.
580, 683, 721, 722, 723, 724

LAQUA, ERIKA.
725

LAROCCA D.
1287

LAROSE, R. H.
1238

LAROSE, RICHARD H.
1289

LARSON R A.
726

LASKIN A I.
533

LASKINA V P.
221

LASTOCHKINA K O.
727

LATYSHEVA, L.
1003

LAUL, J. C.
389

LAZORIN, S. N.
979

LE, H.
983

LE PETIT J.
728, 729

LE POIDEVIN, G. J.
730

LE RAL P.
731

LEAHY, JOHN.
471

LEBEDEVA, E. S.
1106

LEBEDEVA, M. V.
583

LEBEDEVA, V. T.
227

LEBEDINSKII, N. A.
732

LECH J J.
1150

LECLERC, E.
733

LEDUC, G.
734, 735, 1267

LEDUC, GERARD.
736, 737

LEE D R.
738

LEE R F.
739, 740

LEE, RICHAD F.
741

LEE, RICHARD F.
742, 743, 744

LEE, YUNG-LI.
546

LEETMAA, T.
1178

LEGITTIMO, P.
938

LEGOCHKINA, L.
443

LEGUBE, B.
313

LEMAIRE, JACQUES
63

LEMBIK, ZH. L.
745, 776, 1098

LENETSKII, V. A.
1

LEONARDI, V.
1040

LEONI, A.
195

LEPRI L.
746, 747

LESSEM, A. S.
489

LEUNG, R.
10

LEVAGGI, D. A.
748

LEVI, L. A.
864, 865, 866, 867, 868, 869, 870, 871
872, 873

LEVICHEV, S A.
749

LEVIN W.
1285

LEVINS, P. L.
9

LEVITANAITE, R.
443

LEWIS, W. M.
750

LI N N.
182

LI, Y -H.
1293

LIAW G S.
751

LIEMANN F.
490

LILLARD, DORRIS A.
752

LILLE, J.
753

LILLE, U.
616

LIM, B. S.
88

LIND, D T.
165, 754

LINDEN AC VAN DER.
624, 755

LINETSKII, V. A.
794

LINGENS F.
72

LIPARI J M.
256

LISCHKE, PETER.
238

LISENKOVA L L.
1248

LISUNOVA, Z. S.
649

LITERATHY P.
756

LITTLE, ROBERT L.
604

LITVINENKO, I. I.
104

LIU, C. C.
758

LIU, S -Y.
759

LIZINA, N. N.
760

LIZUNOVA, G. M.
656

LLOYD, R.
761

LOCKWOOD P J.
791

LOKTYUSHKINA, M. B.
1003

LOLLINI, M. N.
1070

LONGBOTTOM, JAMES E.
337

LONSANE B K.
762, 1111

LOPEZ C.
1027

LORBACHER H.
763, 764

LOSHAKOV, YU. T.
1079

LOVELL, H. L.
1141

LOVTSEVICH, E. L.
304

LU P Y.
765, 766

LU, P -Y.
767

LUBINSKI K S.
768, 769

LUDZACK, F. J.
770, 771

LUKYANENKO, V I.
373, 772, 773, 774, 1245

LUNT D.
775

LUPANOVA, L. K.
776

LUR'E, YU. YU.
777, 778

LUTSENKO, P. G.
342

LUTSENKO, T. A.
387

LYKOVA, L. K.
779

LYNCH, R S.
780, 1103

LYONS K P.
167

LYSTAD A.
115

LYSYI, I.
781

LYSYJ, I.
897

LYUTIKOVA, N. N.
369

MABRY, T. J.
420

MACIEJOWSKI, FRANCISZEK.
782, 1130

MACKAY, D.
610

MACKAY, DONALD.
611

MACKIE P R.
1273

MADLIN, HOWARD.
271

MAGEE P N.
783

MAGNARADZE, G. F.
784

MAHADEVAN V.
411

MAHADEVAN, VENKATANAYARANA.
421

MAHONEY, G. F.
175

MAJESKI, EDWARD JOSEPH.
785

MAKALETS, B. I.
786, 787, 788

MAKAROVA, V. V.
579

MAKEEV A M.
789

MAKEEVA E N.
789

MAKEIKINA, V. V.
790

MAKRUSHIN, A. V.
872, 873

MAKSIMENKO, YU. L.
103, 405

MAKULA R A.
791

MALASHENKO, YU. P.
706

MALINS D C.
1034

MALINS, DONALD C.
1017

MALLEVIALLE, J.
792

MALOSEJA Z.
793

MAMEDOVA, V. M.
1, 794

MAMONTOVA, O. V.
790

MANCZINGER, JOZSEF.
1187

MANDEL D.
766

MANESCU, S.
795

MANEVICH, L. E.
359

MANTOVANI, E.
796

MANZUROV, V. D.
359

MARANI, F.
1040

MARCHENKO, R. F.
581

MARCIA, E.
1119

MARCONI, SIMONA.
797

MARCZYNSKI B.
230

MARIN, V.
469

MARINESCU A G.
798

MARINESCU D.
798

MARKBREITER, KEITH.
471

MARKIN V N.
987

MARKING L L.
132

MARKING, LEIF L.
799

MARKL, P.
542

MARKOVETZ, ALLEN J.
31

MARTIN J P.
1101

MARTINEZ-LAHOZ A.
1027

MARTINSEN, D. P.
977

MARTONOVA M.
800

MARUOKA, SHOJI.
801

MARX J L.
802

MASADA Y.
612

MASAKI T.

MASALA, MARIA L.
190

MASCIA, CARLO.
190

MASELES, F. C.
419

MASHKEVICH, A. I.
211

MASHUR, V. A.
803

MASSI M.
442

MASTERS, MARGARET J.
804

MATEI, V. E.
805, 806, 807, 808

MATEL, V. E.
809

MATHUR R K.
762

MATSUDA C.
634

MATSUDA T.
883

MATSUDA, YOSHIHARU.
810

MATSUDA, YUKIO.
811, 812

MATSUMOTO, GENKI.
813

MATSUMOTO S.
707

MATSUNAGA, KATSUHIKO.
814

MATSUNAGA, KAZUYOSHI
917

MATSUURA, TAKESHI.
815

MATTHEWS, JOHN E.
816

MATTSON, VINCENT R.
817

MAUK, CHARLES E.
402

MAXWELL J R.
348

MAY, W. E.
223

MAYER F. L. JR.
818

MAZINA, E. I.
1133

MAZMANIDI, N. D.
1309

MAZZEI, M.
796

MCCALEB, KIRTLAND E.
171

MCCORMACK, LAWRENCE M.
820

MC DERMOTT, J H.
819

MCDONALD, F. R.
821

MCDUFFIE, J. R. JR.
895

MCGILL J J.
167

MCGINNES, PAUL R.
823

MCGINNISS M J.
824

MCGONIGLE, E J.
825

MCGUIRE, JOHN M.
826

MCILHENNY, W. F.
1307

MCKEE, HERBERT C.
827

MCKENNA E J.
828

MCKIM, JAMES M.
829

MCKOWN M M.
830, 1290

MCLEAY, D J.
831

MCLEE A G.
832

MCMICHAEL, W. J.
833

MEAD, S. W.
834

MEISEL, M. N.
962, 963, 964, 965

MELDER, L.
55, 835

MELESHCHENKO K F.
836, 837

MELTON R.
296

MENAHAN L A.
1150

MERLE, A.
267

MERLEE, A.
268

MERLET, N.
313

MERRILL, E I.
81

MESHKOVA, O. V.
972

MESSENGER D I.
184

METCALF, R L.
765, 766, 767

METELITSA, D. I.
1082, 1083

METRICO L.
106

METSIK, L.
984

METSIK, R.
838

MEYER T.
839

MEYER-WAARDEN K.
122

MEYERHOFF, R D.
840

MEZHNIN, F. I.
841, 842

MIAGKII B I.
699

MIDDLEBROOKS E J.
843, 1004, 1212

MIDDLEBROOKS, E. JOE.
1005, 1006

MIELUCH, JOZEF.
844

MIGET, R J.
845

MIGUEL, ANTONIO HORACIO.
846

MIHAIL, ALEXANDRA.
1118, 1119

MIKHAILOVA, L. S.
211

MIKRYAKOV, V. R.
436

MIKRYAKOVA, T. F.
580, 724, 847

MIKRYAKOVA, T. V.
683

MILKICAN, RUZICA.
881

MILLER D L.
848

MIMURA T.
612

MINARD, ROBERT D.
143

MINASYAN, K. V.
849

MINEAR, R. A.
539

MINODA Y.
568, 638, 919, 923

MINODA, YASUJI.
927

MIRONETS N V.
837

MIRONOV O G.
351

MIRRLEES, MARGARET S.
850

MIRSON I M.
851

MIRZAYANOV, V. S.
852

MITCHELL, B L.
853

MITCHELL D.
296

MITCHELL D G.
188

MITCHELL R.
1300

MITRA, D. P.
701

MITRA, S. N.
1067

MITROVIC, V.
854

MIURA, SHIGETSUGU.
496

MIURA, YOSHIHARU.
855

MIYAKE Y.
915

MIYAKE, YOSHIO.
917

MIYAZAKI, S.
780, 1103

MOCHIZUKI, AIJI.
856

MOKINA, A. A.
581

MOLDER, L.
857, 858, 1177, 1178

MONARCA, S.
1041, 1069, 1070

MONDAL, A.
1067

MONTGOMERY, H A C.
859

MOORE D E.
860

MOORE, L. J.
39

MOORE, W. A.
770, 1019

MORI, ITSUHIKO.
861

MORI, KAZUYOSHI.
637

MORI, KENICHIRO.
1223

MORI, KYOKO.
518

MORIGUCHI, YUZO.
394

MORITA, MASATOSHI.
862

MORIWAKI Y.
612

MOROZZI G.
204

MORRIS W J.
145

MOSESCU, NICOLAE.

863

MOSEVICH, M. V.
864, 865, 866, 867, 868, 869, 870, 871
872, 873

MOSKAL M.
942

MOTOHIRO T.
874

MOTOHIRO, TERUSHIGE.
875, 876, 877

MOULTON, STUART J.
850

MOYER, J. E.
530

MRKVA, MIROSLAV.
878

MROCZEK, STEFAN.
1222

MROZOWSKA J.
230

MUELLER, W P.
879

MUIR, STEPHEN M.
1010

MUKHERJEE S.
129, 880

MUNJKO, I.
793, 881

MUNJKO, IGNAC.
941

MUNJKO, IGNJAC.
1010

MUNROE, K A.
882

MUNTANJOLA-CVETKOVIC, M.
1010

MURAKAMI A.
883

MURAKAWA, SHINICHI.
855

MURD, A.
753

MURIEL W J.
457

MURPHY, CHRISTOPHER T.
850

MURRAY D A J.
884

MURRAY F E.
499

MURRAY K.
202, 1032

MUSSELWHITE, C. C.
885

MUTAFSCHIEV S.
120

MUZZARELLI R A.
747

MYAGKII, B. I.
706

MYAGKIKH, S. N.
52

MYERS, LEON H.
816

MYTELKA A I.
886

N'GUYEN M H.
728

NACHTIGALL M H.
887

NAGANO, MANGI.
888

NAGASAWA K.
889

NAGASAWA S.
883

NAGATA, EIZO.
890

NAGBHUSHANAM, R.
891

NAGY, G.
1213

NAIR, M. R.
54

NAITO, NAOKI.
639

NAKAGAWA, AKIRA.
518

NAKAI, TOSHIHIRO.
647

NAKAMURA, HIROSHI.
862

NAKATANI S.
638

NAKAYA, MITSUKO.
814

NAMBUDIRI, A. M. D.
892

NASTASE V.
1303

NATOLI, J.
330

NATOLI J G.
60

NAZARENKO, I. V.
894

NEELY, W. C.
895

NEFEDOVA, M. YU.
1148

NEFF, JERRY M.
896

NEGISHI, AKIRA.
488

NEGULESCU A.
798

NEILANDS, O.
970

NEKHOROSHEVA E V.
1105

NELSON, K. H.
781, 897

NELSON R A.
1124

NEMCHENKO, A. G.
790

NETTE, I. T.
1094

NEUHAUSER.
739

NEUJAHR, HALINA Y.
1232

NEWTON, P. R.
781

NIAUSSAT P M.
898

NIAUSSAT, PIERRE.
899

NIEDER, MATTHEW.
471

NIEMI, AA.
900

NIGMATULLINA, A. A.
901, 902, 1217

NIKITINA, N. I.
1094

NIKOLAEVA, T. A.
903, 904

NIKOLAEVA, Z. V.
937

NIMURA, SHUICHI.
862

NISHIDA, SHIGEKAZU.
1223

NISHIMURA, H.
600

NISHIO, TOSHISABURO.
801

NITELEA, I.
1119

NORMAN, KH. K.
1238

NORRIS D B.

312

NOTA, GIORGIO.
905

NOVIK, S. N.
1117

NOVOTNY, J.
906

NOVOTNY, JAROSLAV.
316, 907, 908

NOVOTNY M.
92

NOWAK E.
230

NOWAK, W.
455

NOZAKA, JUNICHIRO.
909

NUMAZAWA, RYOZO.
910, 911

NUNOGAWA J N.
912

NURMUKHAMETOVA, L. A.
708

O'DONNELL R.
1283

O'HARA S C.
112

O'HARA S C M.
500

ODDO N.
922

OGAMO A.
889

OGASAARA, SUSUMU.
589

OGASAWARA, SUSUMU.
590

OGATA, KOICHI.
599, 916

OGATA M.
915, 918

OGATA, MASANA.
548, 917

OGAWA, TSUTOMU.
639

OGILVIE D M.
848

OHMORI S.
918

OHMORI T.
919

OHNO, KYOKO.
855

OHTA Y.
920

OHYA, MASAHIRO.
1209

OIKARI A.
693, 694

OKADA, HIROSUKE.
890

OKADA, NOBORU.
639

OKAZAKI, MITSUO.
855

OKITA, TOSHIICHI.
1261

OKUZAWA A.
707

OL'SINSKAIA N L.
114

OLEVSKII, V. M.
443

OLIVE W E JR.
921

OLIVIERI R.
922

OLSON, K. R.
388

OMORI T.
568, 923, 924, 925, 926

OMORI, TOSHIO.
927

ONISHI, NOBORU.
888

OPPENHEIMER, C H.
845

ORLOVA, O. M.
357

ORR, ELAINE D.
1147

OSADCHII, V. D.
1139

OSE, YOUKI.
391, 392, 393

OSER B L.
399

OSTERROHT C.
928

OSTROUMOVA I N.
86

OTTINGER, R. S.
929, 930, 931

OURISSON G.
348

OVCHINNIKOVA, I. V.
777, 778

OVERCHENKO M B.
1115

OZEROV, A. I.
49, 387, 932

PAAKKONEN R.
18

PAALME, L.
475, 476

PACHECKA, JAN.
236

PADARYAN, G. M.
1156

PAKHOMOVA, A. D.
933, 934, 935, 936

PAKHOMOVA, A. S.
1107

PALOMBARI, ROBERTO.
905

PALUSINSKA M.
230

PANCHENKO, S. E.
586

PANKRATOVA, K. G.
788

PANOVA, V. A.
937

PANTANI, F.
938

PAPCHENKOV V G.
587

PAPKOV, G. I.
1097

PARNOV, YE. I.
482

PARR, O. D.
1302

PATTERSON, J. W.
939

PATTERSON K E.
407

PAUSE R W.
188

PAVLENKO, S. M.
940

PAVLETIC, Z.
793, 881

PAVLETIC, ZLATKO.
941

PAWLACZYK-SZPILOWA M.
942

PAWLOWSKY U.
943, 944, 945

PAWLOWSKY, URIVALD.
946

PAYNE, J F.
947, 948

PAYNE, THOMAS R.
191

PEARSON, EDWARD F.
949

PEDERSEN, M G.
513, 950, 951

PEINAR, U.
753

PEKKARINEN M.
694

PELKONEN O.
16, 17, 18

PELKONEN, OLAVI.
19

PELLERIN F.
952, 953

PELTIER, JEAN C.
148

PENROSE, W R.
948

PENY J.
731

PEPELYAEV, YU. V.
954

PERCELLA, D B.
843

PERESHEIN, V. V.
664, 665

PERRY J J.
99, 140, 206, 208, 209

PERRY R.
501, 502

PETERSEN, M. R.
389, 955

PETRE, I.
795

PETRONIO B M.
442

PETROVA, L. M.
432, 433

PETROVA, T. V.
607

PETTS, K. W.
885

PETUKHOV, V. N.
1120

PETUKHOVA, L A.
773

PEVZNER, I. D.
369

PFUDERER, P.
565

PFUDERER, PETER.
956

PHILPOT, R M.
957

PIKULEVA M M.
697

PILLAY A R.
156

PIMENTEL, DAVID.
613

PINCHUGOV, V. N.
958

PIPER R G.
959, 1121

PITT, W. W. JR.
572, 592, 1201

PITTS, W. W. JR.
573

PLATONOVA, T. K.
666

PLEKHANOV, S. E.
960

PLEKHOTKIN, V F.
749

PLETNIKOVA, I. P.
903, 904

PLOTNIKOVA, V. P.
961

PLUMB, R. H. JR.

489

PLUMMER N.
766

PODREZOVA, T. N.
477

PODZOROVA, E. A.
961

POGLAZOVA, M. N.
962, 963, 964, 965

POHL R J.
966, 967

POHLAND, F. G.
968

POLENOV A L.
805

POLISHCHUK, O. M.
211

POLISSOIS G.
969

POLMANE, G.
970

PONOMAREV, YU. P.
971, 972

POP, VICTOR I.
973

POPE, J. D.
602

POPL M.
163

PORCELLA D B.
1004

PORCELLA, DONALD B.
1005, 1006

PORTHAULT. M.
62

PORTMANN, J. E.
974

POULTER, L. W.
243

POVERENNYI, A. M.
975

POWERS, JOHN J.
752

PRAKASAM T B.
976

PRASAD, BADRI.
1077

PRAUSNITZ, JOHN M.
333

PRENGLE, H. WILLIAM JR.
402

PRICE, PHILIP.
977

PRISTAVU, N.
978

PRIVALOV, V. E.
979

PROKOP'EVA, M. F.
8, 980, 1206

PROSKURYAKOV, V. A.
41, 449, 981

PRUDEN, B. B.
982, 983

PRUEFER, P.
64

PSHIRKOV, S. YU.
1148

PUELS H-D.
763

PUNGOR, E.
1213

PURRE, T.
984

PUSEY, PETER.
985

PUSKAS M.
109

PUST, H. W.
986

PUSTOVOIT, A. G.
864, 865, 866, 867, 868, 869, 870, 871
872, 873

PUZIKOVA N B.
987

PYSHCHEVA, L. L.
357

QUENTIN, E.
1270

RACANELLI, E.
938

RACHINSKII, V. V.
283

RADAEVA, L. A.
49, 988

RADEJ Z.
800

RAEF S F.
989

RAINEY J G.
1237

RAINEY, W T, JR.
565, 956

RAKUSHINA, E. P.
107

RALSTON J R.
990, 991

RANBY B.
23

RANOV A I.
697

RAO, A. V.
993

RAO B V.
992

RAO, P. V. SUBBA.
892

RAO, T S.
692

RASHIDOVA, D. SH.
711

RAST, H. G.
344, 345

RATOVSKII, G. V.
1163

RAUDSEPP, H.
984

RAUNIO V.
18

RAUSINA G.
440

RAYMOND, DEBORAH D.
994

RAYMOND R L.
563

REED, P R.
158

REHM, HANS J.
995

REICHENBACH-KLINKE H-H.
996

REICHERT J K.
997

REID, GEORGE W.
998

REINER A M.
999, 1000, 1001

REMY, F.
561

REPKINA, V. I.
1002, 1003

REYNOLDS, J H.
843, 1004

REYNOLDS, JAMES H.
1005, 1006

RHEINHEIMER G.
556

RIBBONS D W.
215, 216, 281, 920, 1007, 1008

RICHARD J J.
578

RIECK G.
473

RIEUCAU, C.

371

RIGAU J J.
1027

RISEMAN, J. H.
384

RISEMAN, JOHN H.
1009

RISTANOVIC, BOSILJKA.
1010

RIVERA RECIO, P.
260, 261

ROBBINS, PHILLIPS W.
1011

ROBERTIELLO, A.
796, 922

ROBERTSON J M.
323

ROBINSON J L.
249

ROBINSON R J.
92

ROBINSON, W. E.
37, 272, 273

ROBINSON, WILBUR EUGENE.
274

ROBLES, EDWARD G. JR.
265

RODGERS, B. R.
1012

RODZILLER I D.
789

ROGERS A M.
457

ROGOZHIN, G. I.
1013

ROMANENKO V I.
1014

RONNHOLM K.
18

ROSAZZA J P.
1123, 1124

ROSAZZA, JOHN P.
1126

ROSE V C.
181

ROSFJORD, R E.
1015

ROSHCHIN, E. K.
123

ROSS, J. W. JR.
384

ROSSI S S.
1016

ROTH, E.
98

ROUBAL, WILLIAM T.
1017

ROWE R S.
178

ROYER, JAMES L.
1018

ROZENFEL'D, M. G.
222

ROZHENTSOVA, E. P.
696

ROZHKOVA, L. G.
549, 550

ROZHKOVETSKAIA R K.
837

ROZKIN, M. YA.
104

RUBER, H.
735, 1267

RUBY, S. M.
735

RUCHHOFT, C. C.
770, 1019

RUDENKO, A. P.
113

RUDLING, L.
1020

RUEBELT, C.
304

RUESINK R G.
1021

RUKIN, E. I.
615

RUMMEL, W.
1022

RUNGE, FRANZ.
725

RUNOVA Y N.
851

RYABCHENKO, N. S.
342

RYAN C.
739

RYAN, CHARLOTTE.
744

RYAN, J F.
10

RYAN, P. W.
389

RYBAK, I. I.
1023

RYMORZ P.
109

RYZHKOV, L. P.
1024

RYZHOVA, L. I.
972

RZYSKI, EDWARD.
1222

SACHER, REUVEN MORDECHAI.
1025

SADANA, AJIT JAICHAND.
1026

SAENKO, A. S.
975

SAGARDIA F.
1027

SAINO Y.
582

SAKAI, KAORU.
1028

SAKAI, KEIICHI
555

SAKIYA Y.
1029

SAL'NIKOVA, L. S.
1030

SAL'NIKOVA, L. SH.
53, 1031

SALA-TREPAT, J. M.
1032

SALIEV, V. P.
1238

SALMAN, H. A.
1256

SALMINA Z A.
50

SALPETER, J.
255

SALVI, G.
195

SALYAKAEVA, F. I.
656

SAMOILOV, A. L.
1097

SAMPSON K L.
1033

SAMSONOVA, L. M.
690

SANBORN H R.
1034

SANDERS H O.
818

SANTY, M. J.
929, 930, 931

SAPUNKOVA, G. S.
1035, 1036

SARAEVA, V. V.
674, 675, 676, 677

SARIASLANI S.
1037

SATO, NOBUTOSHI.
555

SATO, SADAO.
1299

SATO, TAKAHIKO.
391, 392, 393

SAUER M.
1168

SAUERHEBER R.
740

SAVINA, L. A.
581

SAVINO, A.
1041, 1069, 1070

SAVUSKAN, T. N.
357

SAWA T.
1137

SAWANO, YOSHIHIKO.
639

SAWINSKY, JANOS.
1187

SAXENA, JITENDRA.
1038

SCACCINI, A.
1040

SCACCINI CICATELLI, M.
1039, 1040

SCALF M R.
323

SCASSELLATI SFORZOLINI, G.
1041

SCHAEFER W.
72

SCHAFFER, R. B.
771

SCHARF B.
122

SCHEIDBACH, UTE.
157

SCHEIER A.
1042

SCHLIPKOETER H-W.
763, 764

SCHLIPKOETER, HANS W.
1043

SCHLUETER, ALBERT.
1044

SCHMEDDING D W.
229

SCHMIDT, C. E.
1045

SCHMIDT, RICHARD A.
544

SCHMITZ, WOLFGANG.
1046

SCHNEIDER, H.
1048

SCHNEIDER J.
1047

SCHUBERT J S.
1049

SCHULD C L.
410

SCHULTZ T W.
1050

SCHWALL L R.
509

SCHWARTZ, FREDERICK P.
1051

SCHWARZ, F P.
1052

SCHWARZ, FREDERICK P.
1053, 1054

SCHWARZ, J. R.
1055

SCHWEER, K -H.
480

SCHWEER, K. H.

479

SCOTT C C L.
1056

SCOTT, C. D.
525, 573, 1057

SCOTT, ROGER.
196

SDIKA, A.
1058

SEE C L.
1059

SEIBER, J. N.
1060

SEILER J P.
1061

SEKI H.
1062, 1063, 1064

SELIVANOVA, T. M.
1184

SELLECK R E.
217

SELYANINA, S. G.
1035

SEMENENKO, V. E.
1184

SEMENOV, A. D.
438

SEMENOVA L M.
1065

SEMIN, YU. A.
975

SEMOV, V.
1066

SEN GUPTA, MRS. P.
1067

SERGEEVA, V. A.
864, 865, 866, 867, 868, 869, 870, 871
872, 873

SESTOKAS, J.
1068

SEYFFARTH, KONRAD.

1125

SFORZOLINI, G. S.
1069, 1070

SHABAD A L
963

SHABAD, L. M.
962, 964, 1071, 1072, 1073, 1074, 1075

SHAFIK T.
160

SHAH, MUKUND JETHALAL.
1076

SHAIR, F H.
853

SHAMSUTDINOVA, F. G.
1030, 1031

SHAPIRO, J. S.
77

SHAPIRO, JAMES.
471

SHARKEY, A. G. JR.
1045

SHARMA, PREM KISHORE.
1077

SHAW, G.
4

SHEEHAN, W. D.
155

SHEFTEL V O.
1078

SHELYUG, M. YA.
1079

SHERENESHEVA, V. I.
550

SHEVCHENKO, T. L.
52

SHEVCHENKO, V. N.
387

SHEVLYAGIN, V. N.
1080, 1081, 1120

SHEW D C.

323

SHIBAEVA, L. V.
1082, 1083

SHIMIZU E.
635, 636

SHIMIZU, HIDEYO.
1208, 1209

SHIMIZU K.
638

SHIMIZU T.
1084, 1085, 1086

SHINODA, YOSHIO.
496

SHINOZUKA, FUJIKO.
1087

SHINOZUKA T.
889

SHIRASAKA S.
56

SHIRINKINA, M. I.
1088

SHKANAKIN, N. G.
1098

SHKODICH, P. E.
107, 453, 776, 1089, 1098

SHKORBATOVA, T. L.
971, 972

SHKOROPAD, D. E.
1134

SHMAGIN, YA. G.
984

SHMAL'GAUZEN O I.
1090, 1091, 1092

SHMIDT, L. I.
1093

SHPON'KO, R. I.
1094

SHTEIN, A. L.
1095

SHTREKKER, G. P.
902

SHUCKROW, A. J.
285

SHUKLA O P.
1096

SHULESHOV, E. I.
1097

SHULL, JAMES J.
1147

SHUMAN, RAYMOND.
1306

SHUSHUNOVA, A. F.
1098

SHYAMKANT V.
621, 622

SIDDIQI, I.
1099

SIELICKI M.
1100, 1101

SIELICKI, MARGARETE.
1102

SIGGIA S.
189

SIKKA, H C.
780, 1103

SILANT'EV, A. I.
677

SILKINA, T. V.
980

SILLS, JOE B.
32, 33

SILVESTRI, ARCHILLE.
820

SILVO, OLAVI E. J.
1104

SIMMONDS, P G.
853

SIMONOV, A. I.
1106, 1107

SIMONOV V A.
1105

SIMPSON, EDWARD A.
196

SINCLAIR N A.
1108

SINEL'NIKOV, V. E.
1109, 1110

SINGH H D.
762, 1111

SINGH N.
1112

SINHA S P.
127

SIZOVA, G. S.
1113

SKARKA B.
800

SKIDMORE J F.
1114

SKOROKHODOVA V A.
1115

SKRIABIN G K.
1116, 1117, 1249

SKRYABIN, G. K.
430, 431, 1148

SKVORTSOV, A. F.
698

SLABSHIS, O. A.
1164

SLAVE, T.
1118, 1119

SLEMROVA, JANA.
704

SLYUSARENKO, P. K.
1080, 1081

SMAL, ZBIGNIEW.
1292

SMALLWOOD, HERBERT.
1165

SMETANINA, E. K.
1120

SMILEY, BOB.
1305

SMITH B.
197

SMITH C A.
11

SMITH C E.
959, 1121

SMITH D I.
1122

SMITH, GERARD V.
1125

SMITH, J. K.
621, 622

SMITH, JOE MAUK.
815

SMITH, L L, JR.
165, 644, 754, 1021

SMITH, R. C.
895

SMITH R V.
1123, 1124

SMITH, ROBERT V.
1126

SMITH, ROY M.
168

SNOEYINK, VERNON L.
823, 1127, 1182

SOCZEWINSKI, EDWARD.
1128

SODERGREN, ARNOLD WAYNE.
1129

SODERQUIST, C. J.
1060

SODOWSKI, ANDRZEJ.
844

SOEJIMA M.
56

SOKOLOVSKII, V. V.
49

SOKOLOWSKA, JADWIGA.
782, 1130

SOLBE, J F DE L G.
1131

SOLENOVA, L. G.
1309

SOLI G.
1132

SOLNTSEV, M. YA.
1134

SOLOD, V. A.
1133

SOLODOV, A. I.
1134

SOLYOM, P.
1020

SOLYOM, PETER.
134

SOMOVA, V. G.
691

SONTHEIMER H.
642

SORLINI, CLAUDIA.
201

SOSEBEE, J.
350

SOTNIKOVA, N. G.
667

SOTO, C.
596, 1135, 1136, 1137, 1138

SOTSENKO, N. K.
1139

SOUTHWORTH, G. R.
511

SPACKMAN, W.
1141

SPANGELO, R C.
257

SPANIER, G.
1142

SPARKS R E.
768, 769

SPEYER, M.
735

SPIRYDONOW, ELZBIETA.
236

SPITSYNA D N.
1143

SPRAGUE J B.
379

SPRAGUE, JOHN B.
1144

SPROSTON, THOMAS.
1166

SRINIVASA RAO, M.
692

STAFFORD D A.
1145

STANKIEWICZ M.
672

STARKEY, R J, JR.
1146

STARKEY, ROLAND J. JR.
1147

STAROVOITOV, I. I.
1148, 1249

STARZECKA A.
1149

STATHAM C N.
1150

STAUFFER, J. L.
9

STEBENEVA, I.
1206

STEBLETSOVA, V.
358

STEFANESCU L.
552

STEFANESCU, T.
1151

STEGEMAN J J.
1152

STEIN, ALAN.

1153

STEMPLE, RUTH.
1154

STEPANOV, V. S.
1155

STEPANYAN, I. S.
1156

STEPHENS, D. R.
834

STEVENIN, G.
371

STICH H F.
324

STICH, HANS F.
326

STIEGLITZ, L.
479, 480, 643

STILINOVIC, BOZIDAR.
941

STIRLING, LYNNE A.
1157

STOBIERSKI, J.
620

STOLBUNOV A K.
1158, 1159

STOLP H.
467

STOM D I.
472, 1160, 1161, 1163, 1164, 1204

STOM D J.
1162

STONE, RALPH.
1165

STOVEKEN, JOHN.
1166

STRACHAN, W. M. J.
174

STRACKE, H. U.
428

STRAFELDA, FRANTISEK.
1167

STRAKEY, J. P.
833

STREEBIN, LEALE E.
998

STRELOV V.
1168

STRELYUKHINA, L. M.
1036

STRUHSAKER J W.
1169

STRUHSAKER, JEANNETTE W.
668, 1170, 1171

STUTZ, HANSJAKOB.
363

SUESS M J.
1172, 1173

SUGANO, SABURO.
1174

SUGIHARA, REIKO.
548

SUGIURA, M.
529

SUKHORUKOV B I.
851

SULLIVAN G W.
177

SUSLOV, S. N.
1163

SUVOROVA, N. G.
579

SUZANNE, A.
62

SUZUKI, MASAKAZU.
671

SUZUKI, NOBUTAKE.
532

SUZUKI, SHUKO.
588

SUZUKI, SUKEJI
1223

SVEC H J.
578

SWIFT, D J.
761

SWIFT, W. H.
285

SWINNERTON, J W.
718

SWOFFORD, H. S. JR.
977

SYMONDS, D. C.
1255

SYNZYNYS, B. I.
975

SZANIAWSKA, JOLANTA.
236

SZEBENYI, IMRE.
519

SZYJKA S P.
1150

TABATA, JUNICHIRO.
856

TAGGER S.
728, 729

TAGUCHI H.
1084, 1085, 1086

TAKAHASHI, JOJI.
1175

TAKAHASHI, SEIZO.
1176

TAKAI, YOSHIHARU.
639, 640, 641

TAKAMURA Y.
56

TAKASU, YOSHIO.
810

TAKATSUKI, KEIGO.
555

TAKUEV, YU. S.
1106

TALL D.
125

TAMVELIUS, H.
835, 857, 858, 1177, 1178

TAN, T -H.
1293

TANABE, MASATO.
1179

TANABE, YUZO.
1180

TANAKA, KAZUO.
393

TANAKA, YOSHIE.
810

TANDON S P.
1112

TANI, YOSHIKI.
599, 916

TANTURLI G.
746

TAO, B. Y.
1181

TAPTYKOVA, S. D.
144

TARAZI, DAVID S.
827

TARDIFF, R. G.
1182

TAUBAEV, T. T.
1183

TAUTS, M. I.
1184

TAYLOR B F.
11, 1185

TAYLOR P A.
145

TAYLOR, PETER J.
850

TCHAN Y T.
156

TEPLITSKAYA, T. A.
108

TEPLYAKOVA, E. V.
1186

TERESHCHENKO, A. P.
954

TESSIER, A.
969, 1311

TETTAMANTI, KAROLY.
1187

TEWFIK M S.
547

THIELEMANN, H.
1188, 1189, 1190, 1191, 1192, 1193
1194, 1195, 1196, 1197, 1198, 1199

THIELEMANN, HORST.
725, 1200

THIJSSE G J.
755

THOMAS, C. C. JR.
175

THOMPSON A R.
181

THOMPSON, J E.
572, 573, 1201

THOMPSON W S.
332

THORNTON K.
1202

THORNTON, K. W.
489

THORNTON, KENT W.
1277

THROOP W M.
426, 1203

THRUSTON A D JR.
602

TIKHOMIROV, YU. P.
453, 1089

TILLER, B. A.
173

TIMOFEEVA, S. S.
1161, 1163, 1164, 1204

TIMOFEEVA, T. A.
960

TIMOSHINA L A.
86

TIN'IANOVA N Z.
712

TIN'YANOVA N Z.
713, 1205

TKACHEVA, V. N.
1206

TOEPFER, MELANY
471

TOFT H P.
1207

TOLLIN G.
497

TOLMACHEV, I. A.
1134

TOMOEDA, M.
529

TOMOYEDA, MIKIO.
1208, 1209

TONGE, G. M.
1210

TONOLO A.
922

TORPY M F.
1211, 1212

TOTANI, TETSUYA.
1223

TOTH, K.
1213

TRATTNER, R B.
1015

TRAUD, J.
304

TRAXLER R W.
275

TRECANI, VITTORIO.
201

TRECCANI, V.
73, 1214

TREFILOVA, N. YA.
108

TREGUBOV B A.
453

TRICHET J.
898

TRITZ, G. J.
68

TROIANO, R. A.
1181

TRONDINA, G. I.
1095

TRUBKO, E. I.
1186

TRUDGILL P W.
312

TRUSOV, S. R.
970

TSAM Z S.
1078, 1215

TSANG, WING.
1260

TSAYUN, G. P.
1216

TSEL'NIKER, D. I.
1234

TSOI, A. A.
1217

TSONOPOULOS, CONSTANTINE.
1218

TSUDA, TSUTOMU.
588

TSUJI, MASAO.
709, 1219

TSUYAMA, AKINORI.
1220

TSYGUTKIN, S. G.
585

TUBB, RICHARD A.
1221

TUCEK, FERDINAND.
238

TULLIEZ, JACQUES.
148

TUOMINEN T.
302

TUROVSKAYA, R. V.
1003

TUULMETS, A.
616

TWICHELL, JAMES E.
1018

TYAGUNOVA, T. A.
357

TYCZKOWSKI, ANDRZEJ.
1222

UCHIYAMA H.
889

UEDA, KIYOMOTO.
1175

UEMURA, NAMIO.
1175

UENO, TOSHIO.
671

UETA, TADAHIKO.
1223

UIBOPUU, H.
616

UJHELYI, CS.
1224

UMEHARA K.
638

UMEZAWA N.
1029

UMORIN, P. P.
580, 1225, 1226

UMPELEV, V. L.
1227

UPHAM, R. A.
977

URANO, KOHEI.
647

URSU, GH.
1151

USOVA, E. P.
1113

USPENSKAYA N YE.
30

USUI, AKIRA.
856

UZUNOV, I.
685

VAIDYANATHAN C S.
1228

VAISMAN Y I.
1229

VAJTA, LASZLO.
519

VALENTINO, RAFFAELE.
239

VAN BAALEN C.
1283

VAN BAALEN, CHASE.
1284

VAN DER LINDEN, A. C.
291

VAN SUMERE, C. F.
294

VANDERBORGH, N. E.
493

VANDERMEULEN J H.
1230

VANIN, V. V.
583

VANOSSI, LORENZO.
1231

VARGA, JANOS M.
1232

VASIGOV, T.
1183

VASIL'EVA, G. S.
358

VASILEVA, S.
691

VEBER, N. V.
1233, 1234

VEITH G D.
1235

VEITH, GILMAN D.
1236

VELA G R.
990, 991, 1237

VELDRE, I. A.
1238

VELDRE, I. V.
1239

VELDRE, INGEBORG.
1240, 1241

VELICHKEVICH, A. K.
1107

VELKOTRUB, M. N.
1003

VERBA, V. V.
1183

VEREECKEN J.
149

VERNETTI, J B.
1242

VERSICHELE D.
110

VERTESHEV, M. S.
608

VILENCHIK M M.
851

VILLENEUVE, J. P.
1311

VINOKUR, I. A.
1156

VINOKUROVA T V.
50

VISSER, S.

1311

VITTORI, O.
62

VLASOVA, Z. G.
1243

VOGT, M.
83

VOINOV, S. A.
387

VOLBORTH, A.
1244

VOLODIN, V M.
1245, 1246

VOLOSHINA, A. I.
1247

VON STORP, HENNING.
372

VOROB'EVA, L. I.
114, 144, 1248

VORONIN A M.
1249

VROCHINSKII, K. K.
395, 1079

VRTANESYAN, S. G.
849

WADZINSKI A M.
1007, 1008

WAGNER, K -H.
1099

WAIBEL M.
1250

WAITZ W H JR.
6

WAKEHAM, S T.
1251

WAKSMUNDZKA-HAJNOS, MONIKA.
1128

WALBRIDGE, CHARLES T.
817

WALCZAK, ELZBIETA.
236

WALKER, J. D.
1055, 1252, 1253, 1254

WALKER, P. L.
1141

WALLACE, ALFRED T.
720

WALLER, GEORGE
314

WALLNOEFER P R.
344, 345

WALLNOFER P R.
346

WALLWORK, J. F.
1255

WALSH, D. F.
1256

WARD C H.
989

WARD D M.
1257

WARD, DAVID M.
1258

WARD G S.
1016

WARNER J S.
1259

WASHINGTON, H.
187

WASIK, S P.
1052

WASIK, STANLEY P.
1051, 1054, 1260

WATANABE, IKUO.
1261

WATANABE, KAZUHO.
910, 911

WATANABE N.
883

WATKINSON, R. J.
1157

WATSON G K.
1262, 1263, 1264, 1265

WAYMAN M.
832

WEATHERBY, R. P.
1280

WEAVER M J.
167

WEAVER, R. E. C.
621

WEAVER T L.
1266

WEBB, M.
735, 1267

WEBER J H.
1282

WEBER W J JR.
161

WEDEMEYER, GARY.
1268, 1269

WEIL, L.
1270, 1271

WEISE, G.
64

WELLINGS R A.
501, 502

WENDLING, L. A.
584

WENDT, R. P.
621, 622

WERETELNIK J.
942

WESTMORELAND, P. R.
1012

WESTON J C.
726

WHEATSTONE, K. C.
87, 259

WHIPPLE J A.
340

WHITELEY F R.
1272

WHITTLE K J.
1273

WILBUR, DORIS J.
191

WILD, JAKUB.
844

WILDISH, D J.
1274, 1275

WILES, D. M.
250

WILHM J.
1202

WILHM, JERRY.
1276, 1277

WILLETTS A.
228

WILLIAMS G A.
509

WILLIAMS P A.
202, 1032

WILLIAMSON, KENNETH J.
1278

WILLIS, RAYMOND BRUCE.
1279

WILLOX, S.
1280

WILLS R B.
1281

WILSON, C.
700

WILSON, D F.
538

WILSON, D. M.
82

WILSON, J R.
538

WILSON, O. W.
243

WILSON S A.
1282

WILZBACH, K. E.
584

WINTERS K.
1283

WINTERS, KENNETH.
1284

WISLOCKI P G.
1285

WISSING F.
1286

WITHERSPOON, PAUL A.
147

WODZINSKI R S.
1287

WOLBURG I.
645, 673

WOLF, H W.
819

WOLFE R S.
365

WOLKOFF, A. W.
1288

WOLKOFF, AARON W.
1289

WOLVERTON B C.
830, 1290

WON, KWANG W.
333

WOOD A W.
1285

WOODBRIDGE D D.
248, 751

WOODRUFF, D. L.
39

WOOLHISER, P. H.
1291

WRIGHT K A.
183

WRONSKI, MIECZYSLAW.
1292

WU, D -C.
1293

WURM, HANS J.
1294

YAGI H.
1285

YAGI, HARUHIKO.
421

YAKOBSON, B. V.
1234

YAKOVLEV, G.
1148

YAMADA K.
638, 919, 924, 925, 926

YAMADA, KINJIRO.
496

YAMAZOE, RITSUKO.
1223

YANG R D.
1295

YANKO, W. A.
77

YANYSHEVA N YA.
1296

YAROSHEVSKII, B. N.
1079

YARULLINA, R. K.
1031

YARUSHEK N E.
1297

YASUTAKE, W. T.
1269

YEH, HERMAN J. C.
421

YEH, W. K.
412, 413

YOCUM, FLOYD HENRY, II.
1298

YOKOYAMA, KAZUO.
1299

YOPP J H.

526

YOSHIDA, TAKATOSHI.
671

YOSHIMURA, HIROSHI.
888

YOSHIOKA, H.
420

YOSHIYASU, IKUYO.
1299

YOUNG, D R.
1301

YOUNG L Y.
504, 1300

YOUNG R H F.
912

YOUNG, RODERICK W.
1302

YUDOVICH, E. E.
1216

YUNG, DAVID.
427

YURZHENKO, A. I.
1139

ZACHARIAH P K.
951

ZAITSEVA, V. N.
49

ZAJIC, J. E.
804

ZAKHAROVA, L. I.
580, 683

ZAKHAROVA, T. A.
670

ZAMFIR G.
1303

ZANOBI, A.
796

ZAVOROVSKAYA N A.
1105

ZDYBIEWSKA, M.
1304

ZEE, C. A.
5

ZEFF, JACK D.
1305, 1306

ZEITOUN, M. A.
1307

ZHABIN, M.
49

ZHARKOVA, N. A.
958

ZHOLDAKOVA, Z. I.
1079, 1308

ZHUBANIYAZOV, K. N.
932

ZHUK, I. P.
439, 609

ZHUKOV, B. A.
683

ZHUKOV, B. F.
580, 724

ZNAMENSKAYA, A. P.
1113

ZOBOVA, N. A.
1309

ZOGORSKI, J S.
362

ZOGORSKI, JOHN S.
1310

ZOLEDZIOWSKA, J.
335

ZOLTOWSKI, PIOTR.
844

ZOULALIAN, V.
1311

ZUERCHER, F.
465

ZUMBRUNN, J. P.
1312, 1313

ZYABBAROVA, S. A.
1314

BIBLIOGRAPHIC CITATIONS

<1>

AU ABASHIN, V. G. MAMEDOVA, V. M. LENETSKII, V. A.
IN VSES. NAUCHNO-ISSLED. INST. OLEFIN. BAKU. USSR.
YR 72.
TI DETERMINATION OF STYRENE IN WASTE WATERS FROM THE COPREPARATION OF PROPYLENE OXIDE AND STYRENE BY A DERIVED POLAROGRAPHIC METHOD.
SO AZERB. KHIM. ZH. P169-72. 1972.
LG RS.
DE STYRENE DETN WASTE WATER. WASTE WATER ANALYSIS STYRENE.
AN C 07902009477.

<2>

AU ABBOTT B J. GLEDHILL W E.
YR 71.
TI THE EXTRACELLULAR ACCUMULATION OF METABOLIC PRODUCTS BY HYDROCARBON-DEGRADING MICROORGANISMS.
SO ADV APPL MICROBIOL. 14. P249- 388. 1971.
LG EN.
MJ BACTERIA: ME.
MN ACIDS: BI. BENZENE: ME. ETHERS-CYCLIC: BI. KETONES: BI. OXYGEN-CONSUMPTION. TERPENES: ME.
AN M 72117440.

<3>

AU ABIGNENTE, ENRICO.
IN IST. CHIM. FARM. TOSSICOL. UNIV. NAPOLI. NAPLES. ITALY.
YR 68.
TI CURRENT ASPECTS IN THE TOXICOLOGICAL CHEMISTRY OF PHENOLS.
SO BILL. CHIM. FARM. 107. P269-86; (6), 333-52. 1968.
LG IT.
DE REVIEW PHENOLS TOXICOL. PHENOLS TOXICOL REVIEW. TOXICOL PHENOLS REVIEW. WATER PHENOLS REVIEW. ATM PHENOLS REVIEW. FOODS PHENOLS REVIEW.
AN C 07309043328.

<4>

AU ACHARI, R. G. SHAW, G. HOLLEYHEAD, R.
IN SCH. CHEM. UNIV. BRADFORD. BRADFORD. ENGL.
YR 73.
TI IDENTIFICATION OF IONENE AND OTHER CAROTENOID DEGRADATION PRODUCTS FROM THE PYROLYSIS OF SPOROPOLLENINS DERIVED FROM SOME POLLEN EXINES, A SPORE COAL, AND THE GREEN RIVER SHALE.
SO CHEM. GEOL. 12. P229-34. 1973.
LG EN.
DE SPOROPOLLENIN PYROLYSIS IONENE NAPHTHALENE. POLLEN SPOROPOLLENIN PYROLYSIS. SHALE KEROGEN SPOROPOLLENIN PYROLYSIS. COAL SPOROPOLLENIN PYROLYSIS.
AN C 08025142139.

<5>

AU ACKERMAN, D. G. CLAUSEN, J. F. JOHNSON, R. J. ZEE, C. A.
IN TRW DEFENSE AND SPACE SYSTEMS GROUP, REDONDO BEACH, CALIF. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. OFFICE OF SOLID WASTE MANAGEMENT PROGRAMS. 409 637.
YR 77. 98P.
TI DESTROYING CHEMICAL WASTES IN COMMERCIAL SCALE INCINERATORS. FACILITY REPORT NUMBER 3 - SYSTEMS TECHNOLOGY.
NT FINAL REPT.
PR PC A05/MF A01.
AB INCINERATION TESTS OF SELECTED CHEMICAL WASTES WERE CONDUCTED AT THE FLUIDIZED BED INCINERATOR FACILITY OPERATED BY BLACK CLAWSON FIBRECLAIM, INC. IN FRANKLIN, OHIO. THESE TESTS WERE PERFORMED UNDER CONTRACT WITH SYSTEMS TECHNOLOGY CORPORATION TO DETERMINE THE EFFECTIVENESS OF THERMAL DESTRUCTION OF TWO DIFFERENT INDUSTRIAL LIQUID WASTES: (1) AN AQUEOUS PHENOL SLUDGE, AND (2) AN AQUEOUS SOLUTION OF METHYL METHACRYLATE MONOMER. EACH WASTE WAS BURNED AT TWO DIFFERENT CONDITIONS TO DETERMINE THE EFFECTS OF NORMAL OPERATING AND EQUIPMENT VARIABLES. ANALYSIS OF COMBUSTION GAS SAMPLES INDICATED DESTRUCTION EFFICIENCIES OF OVER 99.999 PERCENT FOR EACH WASTE CONSTITUENT. STANDARD EPA METHOD 5 TESTS WERE PERFORMED ON STACK EMISSIONS TO DETERMINE PARTICULATE LOADING AND COMPOSITION. NO ORGANICS WERE DETECTED IN THE SCRUBBER WATER OR ASH. TEST RESULTS INDICATED THAT EITHER WASTE CAN BE EFFECTIVELY DESTRUCTED IN A FLUIDIZED BED REACTOR. ESTIMATED COST OF DESTROYING 13.2 MILLION LITERS/YEAR OF AQUEOUS METHYL METHACRYLATE WAS $6 MILLION CAPITAL INVESTMENT AND AN OPERATING COST OF

$255/METRIC TON. COST OF INCINERATING 23.8 MILLION LITERS/YEAR OF AQUEOUS PHENOL WASTE WAS ESTIMATED TO BE $6 MILLION CAPITAL INVESTMENT AND $124/METRIC TON OPERATING COST.
MJ WASTE-TREATMENT, WATER-POLLUTION-CONTROL, FLUIDIZED-BED-PROCESSING, PHENOLS, INCINERATORS, AIR-POLLUTION- CONTROL.
MN SLUDGE-TREATMENT, METHACRYLATES, INDUSTRIAL-WASTES, WASTE-DISPOSAL, COST-ESTIMATES, CHEMICAL-ANALYSIS, GAS-ANALYSIS, CAPITALIZED-COSTS, OPERATING-COSTS, SCRUBBERS, FIELD-TESTS, SAMPLING.
ID LIQUID-WASTE-DISPOSAL, METHYL-METHACRYLATE, PROCEDURES, BLACK-CLAWSON-FIBERCLAIM, INCORPORATED, EPA-METHOD-5, NTISEPASW.
AN N PB-265 540/5SL.

<6>

AU ACKERMANN G R. WAITZ W H JR.
YR 76.
TI POLLUTION ABATEMENT THROUGH THE TREATMENT OF INDUSTRIAL WASTE WATER WITH ION EXCHANGE RESINS.
SO INST ENVIRON SCI PROC. 22. (RECD 1977) 491-495.
DE TRANSITION METALS HEAVY METALS PRECIOUS METALS BORON CHROMATE CYANIDE .
AN B 78026162.

<7>

AU ACKMAN R G.
YR 76.
TI VOLATILE KETONES AND ALCOHOLS OF CODWORMS TERRANOVA-DECIPIENS FROM AXENIC CULTURE AND FRESH FISH MUSCLE.
SO J FISH RES BOARD CAN. 33 (12). 2819-2821.
DE COD GAS LIQUID CHROMATOGRAPHY PROPANONE 2 BUTANONE 2 PENTANONE 3 BUTANOL 2 PENTANOL 3.
AN B 63070658.

<8>

AU ADAM'YAN, R. I. PROKOP'EVA, M. F.
IN VSES. NAUCHNO-ISSLED. INST. "VODGEO". TASHKENT. USSR.
YR 76.
TI GAS-CHROMATOGRAPHIC DETERMINATION OF THE AMOUNT OF GLYCEROL IN WASTE WATERS.
SO MASLO-ZHIR. PROM-ST. P26-8. 1976.
LG RS.
DE GLYCEROL DETN WASTEWATER GAS CHROMATOG.
AN C 08614095574.

<9>

AU ADAMS, J. W. CUNNINGHAM, N. J. HARRIS, J. C. LEVINS, P. L. STAUFFER, J. L.
IN LITTLE (ARTHUR D.), INC. CAMBRIDGE, MASS. AGENCY, WASHINGTON, D.C. OFFICE OF SOLID WASTE MANAGEMENT PROGRAMS. 208 850.
YR 76. 94P.
TI DESTROYING CHEMICAL WASTES IN COMMERCIAL-SCALE INCINERATORS.
NT FINAL REPT. SEE ALSO PB-265 541.
PR PC A05/MF A01.
AB TESTS WERE CONDUCTED AT ZIMPRO, INC. ROTHSCHILD, WISCONSIN, TO DETERMINE THE EFFECTIVENESS OF WET AIR OXIDATION FOR DESTRUCTION OF TWO SELECTED AQUEOUS INDUSTRIAL WASTES: COKE PLANT WASTE AND AMIBEN (HERBICIDE) MANUFACTURING WASTE. A PILOT SCALE FACILITY WAS TESTED FOR THE COKE PLANT WASTE WITH LESS THAN 6G/1 TOTAL SOLIDS AND 5.5 G/1 BIOLOGICAL OXYGEN DEMAND (BOD5), CHEMICAL COMPOUNDS SUCH AS CYANIDES, PHENOLS AND CRESOLS WERE 99% DESTROYED; BOD5 AND CHEMICAL OXYGEN DEMAND (COD) WERE REDUCED BY ABOUT 90%. THE CONCENTRATION OF QUINOLINE WAS REDUCED BY ONLY 66%. ESTIMATED COSTS FOR TREATING 2,120 CU M/DAY OF COKE WASTE WERE: $12.3 MM CAPITAL INVESTMENT AND $9.90/CU M TOTAL OPERATING COST. FOR THE AMIBEN WASTE, WITH 55 G/1 TOTAL SOLIDS AND 31 G/1 BOD5, THE TEST SHOWED GREATER THAN 99% DESTRUCTION OF THE MAJOR ORGANIC WASTE COMPONENTS, DICHLORONITROBENZOIC ACIDS, WITH ABOUT 10% CONVERSION TO AN INTERMEDIATE DEGRADATION PRODUCT, DICHLORONITROBENZENE. THE BOD5 AND COD WERE REDUCED BY 90% AND 82%, RESPECTIVELY. ESTIMATED COSTS FOR TREATING 151 CU M/DAY OF AMIBEN WASTE WERE: $2.2 MM CAPITAL INVESTMENT AND $18.00/CU M TOTAL OPERATING COST.
MJ INCINERATORS, INDUSTRIAL-WASTES, COKING, HERBICIDES, BIOCHEMICAL-OXYGEN-DEMAND, SOLID-WASTE-DISPOSAL.
MN MANUFACTURING, COST-ANALYSIS, CAPITALIZED-COSTS, OPERATING-COSTS, OXIDIZERS, PERFORMANCE-EVALUATION, CRESOLS, DESIGN-CRITERIA, PROCESS-

CHARTING, SAMPLING, CHEMICAL-ANALYSIS, AIR-POLLUTION-CONTROL-EQUIPMENT, SCRUBBERS, PILOT-PLANTS, COMBUSTION-PRODUCTS, CYANIDES, PHENOLS.
ID AMIBEN, WET-METHOD, NTISEPASW.
AN N PB-267 987/6SL.

<10>

AU AFGAN, B K. KULKARNI, A V. LEUNG, R. RYAN, J F.
IN CANADA CENTRE FOR INLAND WATERS, WATER QUALITY RESEARCH DIV. BURLINGTON, ONT. CAN.
YR 74.
TI THE DETERMINATION OF FORMALDEHYDE AND RELATED COMPOUNDS IN WATER AND INDUSTRIAL EFFLUENTS.
SO ENVIRONMENTAL LETTERS, 7(1): 53- 65, 1974.
LG EN.
AB NONE.
ID AUTOMATED METHODS, CARBONYL COMPOUNDS, COLORIMETRY, FLUOROMETRY.
DE ALDEHYDES, INDUSTRIAL EFFLUENTS, MEASURING METHODS, MUNICIPAL WATER SUPPLIES, OPTICAL ANALYSIS, WATER QUALITY MEASUREMENTS.
AN P 7501575.

<11>

AU AFTRING R P. CHALKER B E. SMITH C A. TAYLOR B F.
YR 77.
TI ANAEROBIC DEGRADATION OF PHTHALIC-ACID AND TEREPHTHALIC-ACID BY DENITRIFYING BACTERIAL CULTURES.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 77. 263.
DE ABSTRACT.
AN B 77049724.

<12>

AU AGERTON, BOBBY M. CORNETTE, JIMMY C.
IN AIR FORCE ARMAMENT LAB EGLIN AFB FLA. 400 936.
YR 73. 12P.
TI BIODEGRADATION OF BENZENE.
NT FINAL REPT. MAR-MAY 72.
AV DISTRIBUTION LIMITATION NOW REMOVED. 01.
PR PC$3.50/MF$3.00.
AB TWO SPECIES OF BACTERIA CAPABLE OF DEGRADING THE AROMATIC HYDROCARBON BENZENE IN VIVO HAVE BEEN ISOLATED FROM SOIL SAMPLES THAT WERE OBTAINED FROM AREAS WHICH HAD BEEN DRENCHED WITH KEROSENE (JP-4), GASOLINE, AND DIESEL FUEL FOR SEVERAL YEARS. IT WAS REASONED THAT ANY BACTERIA THAT COULD BE OBTAINED FROM THESE SAMPLES WERE EITHER USING THE FUEL AS A SOURCE OF CARBON OR WERE AT LEAST TOLERATING THE FUEL. ONE OF THE MICROORGANISMS, PSEUDOMONAS AERUGINOSA, IS CAPABLE OF DEGRADING BENZENE IN BOTH THE LIQUID AND THE VAPOR PHASES. THE OTHER, A SPECIES OF BACILLUS, ALSO SHOWED GROWTH POTENTIAL IN THE PRESENCE OF BENZENE BUT PRODUCED ONLY AN APPROXIMATELY 50% BREAKDOWN OF BENZENE AS COMPARED TO THE 96% BREAKDOWN PRODUCED BY P. AERUGINOSA UNDER SIMILAR CONDITIONS. (AUTHOR).
MJ BENZENE, BIODETERIORATION, JET-ENGINE-FUELS, BIODETERIORATION, DIESEL-FUELS, BIODETERIORATION, GASOLINE, BIODETERIORATION.
MN BACILLUS, PSEUDOMONAS- AEROGINOSA, PSEUDOMONAS, DISPOSAL, AIR-POLLUTION, WATER-POLLUTION, ULTRAVIOLET-SPECTRA, KEROSENE, GROWTH-GENERAL, MUTATIONS, BACILLACEAE.
ID JP-4-FUELS, PSEUDOMONAS-PUTIDA, PSEUDOMONAS-AERUGINOSA, NTISDODXD.
AN N AD-916 346/0SL.

<13>

AU AHMED M. FOCHT D D.
YR 72.
TI BIO DEGRADATION OF BI PHENYL AND POLY CHLORINATED BI PHENYLS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 72. 6.
DE ABSTRACT BACTERIA SEWAGE.
AN B 73030175.

<14>

AU AHNOFF, MARTIN. JOSEFSSON, BJORN.
IN DEP. ANAL. CHEM. UNIV. GOTHENBURG. GOTEBORG. SWED.
YR 74.
TI SIMPLE APPARATUS FOR ON-SITE CONTINUOUS LIQUID-LIQUID EXTRACTION OF ORGANIC COMPOUNDS FROM NATURAL WATERS.
SO ANAL. CHEM. 46. P658-63. 1974.
LG EN.
DE NATURAL WATER ORG EXTN. CHLORO BIPHENYL DETN WATER. PESTICIDE DETN WATER. LIQ LIQ EXTRACTOR WATER.
AN C 08102006193.

<15>
AU AHOKAS J T.
YR 76.
TI METABOLISM OF 2 5 DI PHENYL OXAZOLE BY TROUT LIVER MICROSOMAL MIXED FUNCTION MONO OXYGENASE.
SO RES COMMUN CHEM PATHOL PHARMACOL. 13 (3). 439-447.
DE MOUSE RAT CARCINOGENESIS NADPH FLUORESCENCE.
AN B 62055907.

<16>
AU AHOKAS J T. PELKONEN O. KARKI N T.
YR 76.
TI CYTOCHROME P-450 AND DRUG INDUCED SPECTRAL INTERACTIONS IN THE HEPATIC MICROSOMES OF TROUT SALMO-TRUTTA-LACUSTRIS.
SO ACTA PHARMACOL TOXICOL. 38 (4). 440-449.
DE HEXO BARBITAL SKF-525-A 2 DI ETHYLAMINOETHYL-2 2-DIPHENYL VALERATE HYDRO CHLORIDE METAB-DRUGS 3 4 BENZ PYRENE CARCINOGEN POLLUTANT DDT ALDRIN BROMO BENZENE PIPERONYL BUTOXIDE NADPH CYTOCHROME C REDUCTASE MONO OXYGENASE SYSTEM ENDOPLASMIC RETICULUM CENTRIFUGATION.
AN B 62005636.

<17>
AU AHOKAS J T. PELKONEN O. KARKI N T.
IN DEPARTMENT OF PHARMACOLOGY, UNIVERSITY OF OULU, FINLAND.
YR 77.
TI CHARALTERIZATION OF BENZO(A)PYRENE HYDROXYLASE OF TROUT LIVER.
SO CANCER RES. 37. 10. P3737-43. OCT 77.
LG EN.
MJ ARYL-HYDROCARBON-HYDROXYLASES: ME. MICROSOMES-LIVER: EN.
MN ANIMAL. CARBON-MONOXIDE: PD. METHYLCHOLANTHRENE: PD. PROADIFEN: PD.
AN M 78001772. 7801.

<18>
AU AHOKAS J. PAAKKONEN R. RONNHOLM K. RAUNIO V. PELKONEN O.
YR 76.
TI OXIDATIVE METABOLISM OF CARCINOGENS BY TROUT LIVER RESULTING IN PROTEIN BINDING AND MUTAGENICITY.
SO HOPPE-SEYLER'S Z PHYSIOL CHEM. 357 (8). 1019.
DE ABSTRACT SALMONELLA-TYPHIMURIUM BENZO A PYRENE HYDROXYLASE.
AN B 77065581.

<19>
AU AHOKAS, JORMA T. PELKONEN, OLAVI. KARKI, NIILO T.
IN DEP. PHARMACOL. UNIV. OULU. OULU. FINLAND.
YR 75.
TI METABOLISM OF POLYCYCLIC HYDROCARBONS BY A HIGHLY ACTIVE ARYL HYDROCARBON HYDROXYLASE SYSTEM IN THE LIVER OF A TROUT SPECIES.
SO BIOCHEM. BIOPHYS. RES. COMMUN. 63. P635-41. 1975.
LG EN.
DE HYDROXYLASE ARYL HYDROCARBON TROUT. BENZOPYRENE METAB TROUT MICROSOME . LIVER TROUT BENZOPYRENE METAB.
AN C 08301001755.

<20>
AU AIZENSHTADT V S.
YR 68.
TI A SANITARY TOXICOLOGICAL CHARACTERIZATION OF THE WASTE WATERS FROM THE PRODUCTION OF ACETALDEHYDE FOLLOWING PROLONGED CIRCULATION IN A SYSTEM.
SO SB NAUCH TR KUIBYSHEV NAUCH- ISSLED INST EPIDEMIOL GIG. (5). 90- 91.
DE MOUSE RAT CHOLIN ESTERASE.
AN B 51043765.

<21>
AU AKESSON B.
IN DEPARTMENT OF ZOOLOGY, UNIVERSITY OF GOTHENBURG, GOTHENBURG, SWEDEN.
TI BIOASSAY STUDIES WITH POLYCHAETES OF THE GENUS OPHRYOTROCHA AS TEST ANIMALS. PP. 121-35.
SO IN: KOEMAN JH, STRIK JJ, ED. SUBLETHAL EFFECTS OF TOXIC CHEMICALS ON AQUATIC ANIMALS. AMSTERDAM, ELSEVIER SCIENTIFIC, 1975. WA 689 S941 1975.
LG EN.
MJ POLYCHAETA: DE. TO.
MN AGE-FACTORS. MALE. REPRODUCTION: DE. SPECIES-SPECIFICITY. (VARIATION).
AN M 76191635. 7609.

<22>
AU AKITSUNE, KENJI.
IN OSAKA FACT. MITSUI TOATSU CHEM. INC. OSAKA. JAPAN.

YR 76.
TI WASTE WATER TREATMENT AT ACRYLONITRILE PLANTS BY THE CATALYTIC WET OXIDATION PROCESS.
SO NIKKAKYO GEPPO. 29. P9-17. 1976.
LG JA.
DE ACRYLONITRILE WASTEWATER WET OXIDN.
AN C 08618126598.

<23>

AU ALBERTSSON A-C. RANBY B.
YR 76.
TI BIO DEGRADATION OF SYNTHETIC POLYMERS THE CARBON-14 METHOD APPLIED TO POLY ETHYLENES.
SO SHARPLEY, J. MILES AND ARTHUR M. KAPLAN (ED.). PROCEEDINGS OF THE THIRD INTERNATIONAL BIODEGRADATION SYMPOSIUM. KINGSTON, RHODE ISLAND, USA, AUGUST 17-23, 1975. XIV+1138P. ILLUS. APPLIED SCIENCE PUBLISHERS LTD: LONDON, ENGLAND. ISBN 0-85334-679-8. (RECD 1977) 743-751.
DE MICROORGANISM FUNGI BACTERIA POLY ETHYLENE CARBON DI OXIDE ENZYME.
AN B 78019908.

<24>

AU ALEKSEEV V A. ANTIPIN B N.
YR 76.
TI TOXICOLOGICAL CHARACTERISTICS AND SYMPTOM COMPLEX OF ACUTE PHENOL INTOXICATION OF CERTAIN FRESH WATER CRUSTACEANS AND MOLLUSKS.
SO GIDROBIOL ZH. 12 (2). 37-44.
DE ASELLUS-AQUATICUS POLYPHEMUS-PEDICULUS DAPHNIA-LONGISPINA DAPHNIA-FULEX LYNCEUS-BRACHYURUS BYTHOTREPHES-LONGIMANUS ACANTHODIAPTOMUS-DENTICORNIS CYCLOPS- VICINUS EUDIAPTOMUS-GRACILIS CYPRIS- PUBERA PHYSA-FONTINALIS LYMNAEA- STAGNALIS RADIX-OVATA VIVIPARUS- VIVIPARUS BITHYNIA-TENTACULATA PLANORBIS-VORTEX PLANORBIS-PLANORBIS DREISSENA-POLYMORPHA ANODONTA-COMPLANATA SPHAERIUM-CORNEUM INVERTEBRATES PHENOL NEURO PARALYSIS.
AN B 62067184.

<25>

AU ALEKSEEV, V. A.
IN INST. BIOL. VNUTR. VOD. BOROK. USSR.
YR 74.
TI TEMPERATURE DEPENDENCE OF RESISTANCE TO TOXICITY OF SOME AQUATIC INSECTS AND ARACHNIDS.
SO BIOL. VNUTR. VOD. 21. P48-50. 1974.
LG RS.
DE INSECT AQUATIC CHEMORESISTANCE TEMP. PHENOL INSECT ARACHNID RESISTANCE.
AN C 08209052294.

<26>

AU ALEKSEEV, V. A.
IN USSR.
YR 73.
TI TOXICOLOGICAL CHARACTERISTICS AND SYMPTOM COMPLEX OF ACUTE PHENOL INTOXICATION OF AQUATIC INSECTS AND ARACHNIDS.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P72-89. 1973.
LG RS.
DE PHENOL TOXICITY INSECT ARACHNID.
AN C 08017091780.

<27>

AU ALEKSEEVA, L. M.
IN USSR.
YR 72.
TI COLORIMETRIC DETERMINATION OF PHENOLS IN SEA WATER WITH PYRAMIDONE AND AMMONIUM PEROXYDISULFATE.
SO TR. GOS. OKEANOGR. INST. NO. 113. P60-5. 1972.
LG RS.
DE PHENOL DETN SEA WATER. SEA WATER ANALYSIS PHENOL.
AN C 07902009669.

<28>

AU ALEKSEYEV V A.
YR 71.
TI A STUDY OF ACUTE PHENOL POISONING IN SOME SPECIES OF INSECTS AND ARACHNIDS PART 2.
SO HYDROBIOL J (ENGL TRANSL GIDROBIOL ZH). 7 (3). 35-39.
DE LIMNOCHARES-AQUATICA CLOEON-DIPTERUM CHIRONOMUS-PLUMOSUS PSECTROCLADIUS-PSILOPTERUS AQUATIC SPECIES.
AN B 72080256.

<29>

AU ALEKSEYEV V A.
YR 71.
TI STUDY OF ACUTE PHENOLIC INTOXICATION OF CERTAIN SPECIES OF AQUATIC INSECTS AND ARACHNIDS.
SO HYDROBIOL J. 6 (5). 22-30.
DE COELAMBUS-NOVEMLINEATUS SIGARA-

STRIATA CLOEON-DIPTERUM ORDELLA-MAXIMA CHIRONOMUS-PLUMOSUS PSECTROCLADIUS-PSILOPTERUS MITES.
AN B 72016840.

<30>
AU ALEKSEYEV V A. USPENSKAYA N YE.
YR 74.
TI A TOXICOLOGICAL DESCRIPTION OF ACUTE PHENOLIC POISONING OF CERTAIN FRESH WATER WORMS.
SO HYDROBIOL J (ENGL TRANSL GIDROBIOL ZH). 10 (4). (RECD 1976) 35-41.
DE EUPLANARIA-LUGUBRIS MESOSTOMA-EHRENBERGII NEMATODA-SP STYLARIA-LACUSTRIS CHAETOGASTER-DIAPHANUS LUMBRICULUS-VARIEGATUS TUBIFEX-TUBIFEX HERPOBDELLA-OCTOCULATA HAEMOPIS-SANGUISUGA GLOSSIPHONIA-COMPLANATA HELOBDELLA-STAGNALIS AQUATIC INVERTEBRATES EGGS YOUNG ADULT HIGH TEMPERATURE STARVATION.
AN B 76082535.

<31>
AU ALLEN, JAMES EDWARD. MARKOVETZ, ALLEN J.
IN DEP. OF MICROBIOL. UNIV. OF IOWA. IOWA CITY. IOWA.
YR 70.
TI OXIDATION OF N-TETRADECANE AND 1-TETRADECENE BY FUNGI.
SO J. BACTERIOL. 103. P426-34. 1970.
LG EN.
DE TETRADECANE FUNGI OXIDN. FUNGI TETRADECANE OXIDN. PENICILLIUM TETRADECENE OXIDN.
AN C 07313063432.

<32>
AU ALLEN, JOHN L. SILLS, JOE B.
IN SOUTHEAST. FISH CONTROL LAB. FISH WILDLIFE SERV. WARM SPRINGS. GA.
YR 70.
TI ULTRAVIOLET IDENTIFICATION AND QUANTITATIVE MEASUREMENT OF QUINALDINE RESIDUES IN FISH.
SO J. ASS. OFFIC. ANAL. CHEM. 53. P1170-1. 1970.
LG EN.
DE UV FISH QUINALDINE DETN. FISH UV QUINALDINE DETN. QUINALDINE DETN UV FISH.
AN C 07403010242.

<33>
AU ALLEN, JOHN L. SILLS, JOE B.
IN SOUTHEAST. FISH CONTR. LAB. FISH AND WILDLIFE SERV. WARM SPRINGS. GA.
YR 70.
TI GLC (GAS-LIQUID CHROMATOGRAPHIC) DETERMINATION OF QUINALDINE RESIDUE IN FISH.
SO J. ASS. OFFIC. ANAL. CHEM. 53. P20-3. 1970.
LG EN.
DE QUINALDINE RESIDUE FISH DETN. FISH QUINALDINE DETN. CHROMATOG QUINALDINE FISH. MUSCLE QUINALDINE DETN.
AN C 07215077550.

<34>
AU ALTON, L. V.
IN USSR.
YR 73.
TI TOXIC EFFECT OF PHENOL AND RESORCINOL ON THE MICROBIC POPULATION OF AN ACTIVE SLUDGE.
SO TR. TALLIN. POLITEKHN. IN-TA. P23-6. 1973.
LG RS.
DE PHENOL EFFECT ACTIVATED SLUDGE. RESORCINOL EFFECT ACTIVATED SLUDGE.
AN C 08306047750.

<35>
AU ALY, OSMAN M. FAUST, SAMUEL D.
IN DEP. ENVIRON. ENG. CAMPBELL SOUP CO. CAMDEN. N. J.
YR 75.
TI THIN-LAYER CHROMATOGRAPHIC ANALYSIS IN WATER POLLUTION.
SO CHROMATOGR. ANAL. ENVIRON. P515- 64. 1975.
LG EN.
AV GROB, ROBERT L.
DE REVIEW WATER POLLUTION ANALYSIS CHROMATOG. POLLUTION WATER ANALYSIS CHROMATOG. THIN LAYER CHROMATOG WATER POLLUTION. AMINO ACID DETN WATER REVIEW. DETERGENT DETN WATER REVIEW. HYDROCARBON DETN WATER REVIEW. PLANT PIGMENT DETN WATER REVIEW. PHENOL DETN WATER REVIEW. PESTICIDE DETN WATER REVIEW. HERBICIDE DETN WATER REVIEW.
AN C 08504025166.

<36>
AU AMES B N.
YR 74.
TI A COMBINED BACTERIAL AND LIVER TEST SYSTEM FOR DETECTION AND CLASSIFICATION OF CARCINOGENS AS

MUTAGENS.
SO GENETICS. 78 (1). (RECD 1975) 91-95.
DE RAT HUMAN LIVER SALMONELLA-TYPHIMURIUM FRAMESHIFT MUTATIONS AFLA TOXIN B-1 BENZO A PYRENE 2 ACETYLAMINO FLUORENE METABOLIC ACTIVATION.
AN B 75080260.

<37>

AU ANDERS D E. DOOLITTLE F G. ROBINSON W E.
YR 73.
TI ANALYSIS OF SOME AROMATIC HYDRO CARBONS IN A BENZENE SOLUBLE BITUMEN FROM GREEN RIVER SHALE.
SO GEOCHIM COSMOCHIM ACTA. 37 (5). 1213-1228.
DE USA PLANT BIOCHEMICAL RESIDUES MASS SPECTROSCOPY IR SPECTROSCOPY GAS CHROMATOGRAPHY DEHYDROGENATION.
AN B 57015556.

<38>

AU ANDERSON, G. L.
IN INSTITUTE OF GAS TECHNOLOGY, CHICAGO, ILL. DEVELOPMENT ADMINISTRATION. 9500656.
YR 76. 13P.
TI OZONATION OF HIGH LEVELS OF PHENOL IN WATER.
NT 68. ANNUAL MEETING OF AMERICAN INSTITUTE OF CHEMICAL ENGINEERING, LOS ANGELES, CALIFORNIA, USA, 16 NOV 1975.
PR PC A02/MF A01.
AB HIGH LEVELS OF PHENOLIC MATERIAL ARE OFTEN PRODUCED IN FUEL CONVERSION PROCESSES SUCH AS COAL GASIFICATION, SHALE OIL RECOVERY, AND CATALYTIC CRACKING UNITS. OZONE HAS BEEN DEMONSTRATED TO REACT WITH PHENOL OVER WIDE RANGES OF CONDITIONS. OZONATION WAS STUDIED AT VARIOUS CONCENTRATIONS OF PHENOL, CHEMICAL OXYGEN DEMAND, AND PH IN A CONTINUOUS REACTION. THE RESULTS SHOWED THAT THE FOLLOWING EQUATION COULD DESCRIBE THE RATE OF REACTION BETWEEN OZONE AND PHENOL: (D(PHI OH)/DT) = (A)P/SUB O SUB 3 /(K(PHI - OH) + K'(PHI - O EXP -)). IN ADDITION, IT WAS FOUND THAT, AT A HIGH PH, OZONE OXYGEN ATOM UTILIZATION COULD APPROACH 100%. (ERA CITATION 02: 014308).
MJ OZONE, PHENOLS.
MN ABUNDANCE, AQUEOUS-SOLUTIONS, CATALYTIC-CRACKING, CHEMICAL-REACTION-KINETICS, COAL-GASIFICATION, DIAGRAMS, EQUATIONS, PH-VALUE, SHALE-OIL, TABLES.
ID ERDA-400201, ERDA-040500, ERDA-010600, NTISERDA.
AN N CONF-751107-18.

<39>

AU ANDERSON, J. W. MOORE, L. J. BLAYLOCK, J. W. WOODRUFF, D. L. KIESSER, S. L.
IN BATTELLE PACIFIC NORTHWEST LABS. RICHLAND, WASH. AND DEVELOPMENT ADMINISTRATION. 9500022.
YR 76. 27P.
TI BIOAVAILABILITY OF SEDIMENT- SORBED NAPHTHALENES TO THE SPIUNCLUID WORM, PHASCOLOSOMA AGASSIZII.
NT NOAA SYMPOSIUM ON FATE AND EFFECTS OF PETROLEUM HYDROCARBONS IN MARINE ECOSYSTEMS AND ORGANISMS, SEATTLE, WASHINGTON, UNITED STATES OF AMERICA (USA), 10 NOV 1976.
PR PC A03/MF A01.
AB THE OBJECTIVES OF THIS STUDY WERE TO DETERMINE THE ACCUMULATION AND RELEASE PARAMETERS OF NAPHTHALENES FOR THE BURROWING PEANUT WORM, (SIPUNCULIDA) PHASCOLOSOMA AGASSIZII. SO THAT UPTAKE FROM SEDIMENT COULD BE COMPARED TO THAT FROM CONTAMINATED WATER, THE LATTER WAS ALSO BRIEFLY INVESTIGATED. SEDIMENT-OIL MIXTURES WERE PRODUCED AND USED IN TWO WAYS TO EXAMINE THE VARIABILITY THAT MIGHT BE PRODUCED BY DIFFERENT TYPES OF ACTUAL OIL SPILLS. (ERA CITATION 02: 049801).
MJ ANNELIDS, NAPHTHALENE.
MN AQUATIC-ECOSYSTEMS, AQUATIC-ORGANISMS, ECOLOGICAL-CONCENTRATION, ENVIRONMENTAL-EFFECTS, METABOLISM, OIL-SPILLS, SEAWATER, SEDIMENTS, TISSUE-DISTRIBUTION, WATER-POLLUTION.
ID ERDA-520200, ERDA-560304, ERDA-020900, BIOACCUMULATION, INDICATOR-SPECIES, BIOINDICATORS, PEANUT-WORM, PHASCOLOSOMA-AGASSIZII, NTISERDA.
AN N BNWL-SA-5864.

<40>

AU ANDRES, A. G. KURAZHSKOVSKAYA, T. N.
IN USSR.
YR 69.
TI HISTOPATHOLOGICAL CHANGES IN BREAM (ABRAMIS BRAMA) DURING EXPERIMENTAL

ACUTE PHENOLIC POISONING.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 19. P73-86. 1969.
LG RS.
DE PHENOL POISONING ABRAMIS. POISONING PHENOL ABRAMIS. ABRAMIS PHENOL POISONING. FISH PHENOL POISONING.
AN C 07221108423.

<41>
AU ANDROSOVA, E. V. PROSKURYAKOV, V. A. CHISTYAKOV, A. N.
IN LENINGRAD. TEKHNOL. INST. IM. LENSOVETA. LENINGRAD. USSR.
YR 70.
TI OXIDATION OF FLUORANTHENE BY ATMOSPHERIC OXYGEN IN A BASIC AQUEOUS MEDIUM.
SO ZH. PRIKL. KHIM. (LENINGRAD). 43. P1624-6. 1970.
LG RS.
DE OXIDN FLUORANTHENE FLUORENONECARBOXYLIC ACID. FLUORANTHENE OXIDN FLUORENONECARBOXYLIC ACID. FLUORENONECARBOXYLIC ACID FLUORANTHENE OXIDN.
AN C 07319098674.

<42>
AU ANON.
IN ENVIRON. PROT. AGENCY. WASHINGTON. D. C.
YR 73.
TI LIST OF TOXIC (WATER) POLLUTANTS.
SO FED. REGIST. 38. P24342-4. 1973.
LG EN.
DE WATER POLLUTANT FEDERAL REGISTER. INSECTICIDE WATER FEDERAL REGISTER . MERCURY WATER FEDERAL REGISTER. CADMIUM WATER FEDERAL REGISTER. CYANIDE WATER FEDERAL REGISTER. TOXAPHENE WATER FEDERAL REGISTER. BIPHENYL CHLORINATED WATER FEDERAL REGISTER.
AN C 08105021894.

<43>
AU ANONYMOUS.
IN ANONYMOUS.
YR 77.
TI DETERMINATION OF TOTAL CYANIDE: SCOPE AND FIELD OF APPLICATION.
SO EFFLUENT & WATER TREATMENT JOURNAL, 17(2): 77-79, FEB. 1977.
LG EN.
AB NONE.
DE CYANIDES, WATER POLLUTANTS, LABORATORY METHODS, CHEMICAL ANALYSIS.
AN P 7704227.

<44>
AU ANONYMOUS.
IN ANONYMOUS.
YR 77.
TI GAS DIALYSIS SPEEDS CYANIDE ANALYSIS.
SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, 11(1): 30-31, JAN. 1977.
LG EN.
AB NONE.
ID GAS DIALYSIS.
DE WATER POLLUTANTS, INDUSTRIAL EFFLUENTS, CHEMICAL ANALYSIS, DIALYSIS, CYANIDES.
AN P 7702230.

<45>
AU ANONYMOUS.
YR 71.
TI CONFERENCE IN THE MATTER OF POLLUTION OF THE NAVIGABLE WATERS OF WESTERN SOUTH DAKOTA.UNGE
SO CONFERENCE IN THE MATTER OF POLLUTION OF THE NAVIGABLE WATERS OF WESTERN SOUTH DAKOTA. PROCEEDINGS. (HELD IN RAPID CITY, S.D. OCT. 19-21, 1971). U.S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, D.C. 611 PAGES. '1971? .
LG EN.
AB NONE.
ID CYANIDE, WESTERN AREA., PROCEEDINGS, INDIVIDUAL TESTIMONIES.
DE WATERWAYS, METALS, MERCURY, TOXIC MATERIALS, CONFERENCES, SOUTH DAKOTA.
AN P 7300212.

<46>
AU ANONYMOUS.
YR 72.
TI PUNGENT AIR-WATER POLLUTION CHECKED BY INCINERATION.
SO CHEMICAL PROCESSING. CHICAGO, 35(8): 44, AUG. 1972.
LG EN.
AB NONE.
ID PYRIDINE, PICOLINE., HARRIMAN NEPERA CHEMICAL CO.
DE ODORS, CHEMICAL WASTES, FUMES, INCINERATORS, LIQUID WASTE, DISPOSAL, NEW YORK.
AN P 7300171.

<47>
AU ANONYMOUS.
YR 70.
TI MONITOR WARNS INSTANTLY WHEN PHENOL PPM GO UP.
SO CHEMICAL PROCESSING, 33(8): 63, AUG. 1970.
LG EN.
AB NONE.
ID PHOTOMETRIC ANALYZER.
DE CHEMICAL INDUSTRY, PHENOL, MONITORING SYSTEMS, EFFLUENTS, INSTRUMENTS .
AN P 7004605.

<48>
AU ANONYMOUS.
YR 70.
TI GAS-WATER CHROMATOGRAPHY AIDS WATER POLLUTION ANALYSIS.
SO U.S. NATIONAL BUREAU OF STANDARDS. WASH. D.C. TECHNICAL NEWS BULLETIN, 54(7): 143, JULY 1970.
LG EN.
AB NONE.
ID ETHYLENE, WATER TESTING, PROPYLENE, ISOBUTENE, BENZENE, TOLUENE.
DE HYDROCARBONS, OIL-WATER SEPARATORS, GAS-LIQUID CHROMATOGRAPHY.
AN P 7004256.

<49>
AU ANTONOV, V. N. KRYATKOVSKII, A. N. RADAEVA, L. A. KUZNETSOV, V. I. SOKOLOVSKII, V. V. ZAITSEVA, V. N. OZEROV, A. I. ZHABIN, M. S.
IN USSR.
YR 72.
TI COMBINED SYSTEM OF PURIFICATION OF CONCENTRATED CYANIDE-CONTAINING WASTES OF THE LENINGRAD PLANT WITH AUTOMATION OF PROCESSES AND UTILIZATION OF CYANIDES AND OTHER COMPONENTS.
SO TR. NAUCH.-ISSLED. PROEKT. INST. OBOGASHCH. RUD TSVET. METAL. "KAZMEKHANOBR". NO. 8. P162-7. 1972.
LG RS.
DE CYANIDE WASTE WATER PURIFN.
AN C 07912070008.

<50>
AU ANTONOVA V I. SALMINA Z A. VINOKUROVA T V.
IN N/A.
YR 77.
TI TOXICOLOGY OF POLY ETHYLENE POLY AMINE AND SUBSTANTIATION OF ITS MAXIMUM PERMISSIBLE CONCENTRATION IN BODIES OF WATER.
SO GIG SANIT. (2). 32-35.
LG EN.
DE MICE RATS.
AN B 65024428.

<51>
AU ANTONOVA, K. N. BARKHATOVA, V. I.
IN USSR.
YR 69.
TI PURIFICATION OF WASTE WATERS BY THE METHOD OF OXIDATION OF ORGANIC SUBSTANCES IN STEAM-GAS PHASE.
SO SB. NAUCH. TR. KUZBASS. POLITEKH. INST. NO. 18. P52-4. 1969.
LG RS.
DE DICHLOROETHANE OXIDN WASTE WATER. MANGANESE OXIDE DICHLOROETHANE OXIDN. CATALYTIC OXIDN DICHLOROETHANE.
AN C 07420102843.

<52>
AU ANTONOVA, K. N. BARKHATOVA, V. I. SHEVCHENKO, T. L. KUZ'MINA, N. P. MYAGKIKH, S. N.
IN USSR.
YR 71.
TI PURIFICATION OF WASTE WATERS BY OXIDATION OF ORGANIC IMPURITIES BY ATMOSPHERIC OXYGEN.
SO SB. NAUCH. TR. KUZBAS. POLITEKH. INST. NO. 34. P35-41. 1971.
LG RS.
DE WASTE WATER OXIDN. CHLOROETHANE REMOVAL WATER.
AN C 07822140137.

<53>
AU ANTONOVA, N. E. SAL'NIKOVA, L. SH.
IN USSR.
YR 70.
TI EXPLANATION OF THE POSSIBLE BIOLOGICAL PURIFICATION OF WASTE WATERS FROM CRESOL PRODUCTION BY THE OXIDATIVE DECARBOXYLATION OF M-TOLUIC ACID.
SO TR. NAUCH.-ISSLED. INST. NEFTEKHIM. PROIZVOD. NO. 2. P51-4. 1970.
LG RS.
DE TOLUIC ACIDS WASTES BIOCHEM CLEANING. CRESOL PRODN WASTE WATERS. PHENOLS WASTE WATERS. OXIDATIVE DECARBOXYLATION TOLUIC ACIDS. DECARBOXYLATION TOLUIC ACIDS.
AN C 07414067442.

<54>

AU ANTONY, P. D. NAIR, M. R.
IN CENT. INST. FISH. TECHNOL. COCHIN. INDIA.
YR 75.
TI STUDIES ON PHENOLASE ENZYME IN PRAWNS. II. THE INHIBITORY ACTION ON THE ENZYME BY CERTAIN CHEMICAL AGENTS.
SO FISH. TECHNOL. 12. P112-15. 1975.
LG EN.
DE PHENOLASE PRAWN METAPENAEUS INHIBITION.
AN C 08423161078.

<55>

AU ARRO, J. MELDER, L.
IN TALLIN. POLITEKH. INST. TALLINN. USSR.
YR 76.
TI CALCULATION OF DISTRIBUTION COEFFICIENTS OF POLAR SUBSTANCES BETWEEN A MIXTURE OF ORGANIC SOLVENTS AND WATER.
SO ZH. FIZ. KHIM. 50. P2601-4. 1976.
LG RS.
DE PARTITION COEFF MIXED EXTRACTANT. PHENOL PARTITION NONPOLAR EXTRACTANT. NONPOLAR EXTRACTANT PHENOL EXTN.
AN C 08604022418.

<56>

AU ASADA Y. MASAKI T. TAKAMURA Y. SHIRASAKA S. KUBOTA M. KODAMA O. SOEJIMA M.
YR 73.
TI REPORT OF ANALYSES FOR INDUSTRIAL WASTE WATER IN 28 FACTORIES.
SO SCI REP FAC AGRIC IBARAKI UNIV. (21). (RECD 1974) 65-74.
DE JAPAN COLIFORM BACTERIA METALS MINERALS CYANIDE PHENOLS TOTAL NITROGEN ALKALINITY METAL FACTORIES CEMENT FACTORIES FOOD PROCESSING PLANTS SEWAGE DRAINAGE WATER POLLUTION STANDARDS.
AN B 59039768.

<57>

AU ASPINWALL R.
IN ESSEX RIVER AUTHORITY, CHELMSFORD, ESSEX, ENGLAND.
TI PHENOLIC POLLUTION IN CHALK AT BECKTON, ESSEX. PP. 299-302.
SO IN: COLE JA, ED. GROUNDWATER POLLUTION IN EUROPE. PORT WASHINGTON, N.Y. WATER INFORMATION CENTER, 1974. WA 689 C7513G 1974.
LG EN.
MJ PHENOLS.
MN ENGLAND: (EN). WATER-POLLUTION-CHEMICAL: PC.
AN M 76168800. 7608.

<58>

AU ASS, M. I. KHOKHLOVA, M. M.
IN USSR.
YR 72.
TI BIOLOGICAL PURIFICATION OF WASTE WATERS FROM A POLE-IMPREGNATING PLANT POLLUTED WITH ANTHRACENE OIL AND PETROLEUM SOLVENTS.
SO NOV. METODY TIPY SOORUZH. OCHIST. PROIZVOD. GOR. STOCHN. VOD. MEZHVUZ. SB. TR. LENINGR. INZH.- STROIT. INST. NO. 1. P93-9. 1972.
LG RS.
DE WOOD PRESERVATIVE WASTEWATER TREATMENT. ANTHRACENE OIL REMOVAL WASTEWATER. PETROLEUM SOLVENT REMOVAL WASTEWATER.
AN C 08122140561.

<59>

AU ATKINSON A.
YR 75.
TI BACTERIAL CYANIDE DE TOXIFICATION.
SO BIOTECHNOL BIOENG. 17 (3). 457- 460.
DE BACILLUS-STEAROTHERMOPHILUS INDUSTRIAL POLLUTANT RHODANESE TEMPERATURE.
AN B 60048805.

<60>

AU ATKINSON L P. DUNSTAN W M. NATOLI J G.
YR 77.
TI THE ANALYSIS AND CONTROL OF VOLATILE HYDRO CARBON CONCENTRATIONS BENZENE DURING OIL BIOASSAYS.
SO WATER AIR SOIL POLLUT. 8 (2). 235-242.
DE SKELETONEMA-SP PHYTO PLANKTON GROWTH METABOLIC UPTAKE.
AN B 64059236.

<61>

AU ATOVMYAN, E. G. ARUTYUNYAN, E. S.
IN USSR.
YR 76.
TI DEGRADATION AND STABILIZATION OF HIGH-MOLECULAR-WEIGHT POLYETHYLENE OXIDE DURING AGING IN DILUTE AQUEOUS SOLUTIONS.

SO PLAST. MASSY. P47-8. 1976.
LG RS.
DE POLYETHYLENE OXIDE SOLN STABILIZATION. DEGRDN POLYETHYLENE OXIDE AQ SOLN. KINETICS DEGRDN POLYETHYLENE OXIDE.
AN C 08512078602.

<62>

AU AUDOUARD, Y. SUZANNE, A. VITTORI, O. PORTHAULT. M.
IN LAB. CHIM. ANAL. III. UNIV. LYON I. VILLEURBANNE. FR.
YR 75.
TI DETERMINATION OF PHENOL IN WATER BY ALTERNATING POTENTIAL DIFFERENCE POLAROGRAPHY AND IMPULSE POLAROGRAPHY.
SO BULL. SOC. CHIM. FR. P130-2. 1975.
LG FR.
DE PHENOL DETN WATER POLAROG. WASTEWATER ANALYSIS PHENOL POLAROG. SEAWATER ANALYSIS PHENOL POLAROG.
AN C 08226175055.

<63>

AU AUDUREAU, JOEL. FILIOL, CHRISTIAN. BOULE, PIERRE. LEMAIRE, JACQUES .
IN LAB. PHOTOCHIM. UNIV. CLERMONT. AUBIERE. FR.
YR 76.
TI PHOTOLYSIS AND PHOTO-OXIDATION OF PHENOL IN AQUEOUS SOLUTION.
SO J. CHIM. PHYS. PHYS.-CHIM. BIOL. 73. P613-20. 1976.
LG FR.
DE PHOTOLYSIS AQ PHENOL. OXIDN PHOTOCHEM PHENOL AQ. PHOTOOXIDN PHENOL AQ . FLUORESCENCE AQ PHENOL PHOTOOXIDN.
AN C 08611071339.

<64>

AU AUERBACH, S. PRUEFER, P. WEISE, G.
IN SEKT. WASSERWES. TECH. UNIV. DRESDEN. DRESDEN. E. GER.
YR 73.
TI DETRIMENTAL EFFECTS OF TOXIC CHARGE BY HEAVY METALS OR PHENOL ON SUBMERGED WATER PLANTS (FONTINALIS ANTIPYRETICA).
SO INT. REV. GESAMTEN HYDROBIOL. 58. P19-32. 1973.
LG GE.
DE HEAVY METAL SUBMERGED WATER PLANT. FONTINALIS RESPIRATION HEAVY METAL .
AN C 08006030408.

<65>

AU AURICH, H. EITNER, G.
IN BEREICH BIOCHEM. KARL-MARX-UNIV. LEIPZIG. LEIPZIG. E. GER.
YR 73.
TI OXIDATION OF N-HEXADECANE BY ACINETOBACTER CALCO-ACETICUS. RESTRICTION AND INDUCTION OF THE PARTICIPATING ENZYME.
SO Z. ALLG. MIKROBIOL. 13. P539-44. 1973.
LG GE.
DE HYDROCARBON OXIDN ACINETOBACTER REGULATION. ENZYME INDUCTION RESTRICTION BACTERIA.
AN C 08009045517.

<66>

AU AUSTEN R A. DUNN N W.
IN SCHOOL OF BIOLOGICAL TECHNOLOGY, UNIVERSITY OF NEW SOUTH WALES, KENSINGTON, N.S.W.
YR 77.
TI A COMPARATIVE STUDY OF THE NAH AND TOL CATABOLIC PLASMIDS IN PSEUDOMONAS PUTIDA.
SO AUST J BIOL SCI. 30. 4. P357-66. AUG 77.
LG EN.
MJ PLASMIDS.
MN COMPARATIVE-STUDY. TOLUENE: AA, ME.
AN M 78102712. 7805.

<67>

AU AUSTERN, BARRY M. DOBBS, RICHARD A. COHEN, JESSE M.
IN NATL. ENVIRON. RES. CENT. U. S. ENVIRON. PROT. AGENCY. CINCINNATI. OHIO.
YR 75.
TI GAS-CHROMATOGRAPHIC DETERMINATION OF SELECTED ORGANIC COMPOUNDS ADDED TO WASTE WATER.
SO ENVIRON. SCI. TECHNOL. 9. P588- 90. 1975.
LG EN.
DE GAS CHROMATOG ORG WASTEWATER. STYRENE GAS CHROMATOG WASTEWATER. XYLENE GAS CHROMATOG WASTEWATER. ETHYLBENZENE GAS CHROMATOG WASTEWATER. NITROBENZENE GAS CHROMATOG WASTEWATER. ACETOPHENONE GAS CHROMATOG WASTEWATER. ANISIDINE GAS CHROMATOG WASTEWATER. ANETHOLE GAS CHROMATOG WASTEWATER. TRICHLOROETHYLENE GAS CHROMATOG WASTEWATER . TURPENTINE GAS CHROMATOG WASTEWATER.
AN C 08310084430.

<68>

AU AVERETT, D. R. TRITZ, G. J.
IN DEP. MICROBIOL. UNIV. GEORGIA. ATHENS. GA.
YR 76.
TI A METHOD FOR THE RAPID SEPARATION AND CHARACTERIZATION OF BIOLOGICAL PYRIDINES.
SO J. CHROMATOGR. SCI. 14. P350-3. 1976.
LG EN.
DE PYRIDINE COMPD PAPER CHROMATOG.
AN C 08513089524.

<69>

AU AVERY, NOYES L. FRIES, WILLIAM.
IN POLLUT. CONTROL RES. DEP. ROHM AND HAAS CO. PHILADELPHIA. PA.
YR 75.
TI SELECTIVE REMOVAL OF CYANIDE FROM INDUSTRIAL WASTE EFFLUENTS WITH ION-EXCHANGE RESINS.
SO IND. ENG. CHEM. PROD. RES. DEV. 14. P102-4. 1975.
LG EN.
DE CYANIDE REMOVAL WASTEWATER. FERROUS ION CYANIDE COMPLEX.
AN C 08304032661.

<70>

AU AXCELL B C. GEARY P J.
YR 73.
TI THE METABOLISM OF BENZENE BY BACTERIA. PURIFICATION AND SOME PROPERTIES OF THE ENZYME CIS-1,2-DIHYDROXYCYCLOHEXA-3,5-DIENE (NICOTINAMIDE ADENINE DINUCLEOTIDE) OXIDOREDUCTASE (CIS-BENZENE GLYCOL DEHYDROGENASE).
SO BIOCHEM J. 136. 4. P927-34. DEC 73.
LG EN.
MJ BENZENE: ME.
MN ALCOHOL-OXIDOREDUCTASES: AI. CHLOROMERCURIBENZOATES: PD. CYCLOHEXANOLS. ENZYME-ACTIVATION. IRON: PD. SODIUM-DODECYL-SULFATE.
AN M 74135964.

<71>

AU AXT G.
TI RESULTS OF CONTINUOUS TOXICITY MEASUREMENTS WITH BACTERIA.
SO HUSMANN, W. (ED.). VOM WASSER, BAND 41. (ON WATER, VOL. 41). (IN GER.). VIII+487P. ILLUS. VERLAG CHEMIE: WEINHEIM, WEST GERMANY. ISBN 3-527-25546-X. 1973 (1974) (RECD 1975) 409-414.
DE SEWAGE WATER POLLUTION SALICYLALDEHYDE NITROBENZOL ENDOSULFAN INSECTICIDE CYANIDE MERCURY SILVER CUPRIC ION ARSENIC LEAD NICKEL CADMIUM ZINC.
AN B 76003387.

<72>

AU BACHOFER R. LINGENS F. SCHAEFER W.
YR 75.
TI CONVERSION OF ANILINE INTO PYRO CATECHOL BY A NOCARDIA-SP INCORPORATION OF OXYGEN-18.
SO FEBS (FED EUR BIOCHEM SOC) LETT. 50 (2). 288-290.
DE INSECTICIDE BIO DEGRADATION SOIL MICROORGANISMS.
AN B 76012097.

<73>

AU BAGGI G. CATELANI D. GALLI E. TRECCANI V.
YR 72.
TI THE MICROBIAL DEGRADATION OF PHENYL ALKANES 2 PHENYL BUTANE 3 PHENYL PENTANE 3 PHENYL DODECANE AND 4 PHENYL HEPTANE.
SO BIOCHEM J. 126 (5). 1091-1097.
DE PSEUDOMONAS NOCARDIA.
AN B 54027809.

<74>

AU BAHR T G.
YR 73.
TI ELECTRO PHYSIOLOGICAL RESPONSES OF TROUT TO DISSOLVED OXYGEN AND CYANIDE.
SO GLASS, GARY E. (ED.). BIOASSAY TECHNIQUES AND ENVIRONMENTAL CHEMISTRY. XI+499P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. 231-258.
DE LATERAL LINE NERVE HEART POLLUTION STRESS ISCHEMIA.
AN B 73081194.

<75>

AU BAHR, THOMAS GORDON.
IN MICHIGAN STATE UNIVERSITY (0128) PH.D. 1968 130PP.
YR 68.
TI ELECTROPHYSIOLOGICAL RESPONSES OF THE LATERAL LINE AND HEART TO STRESSES OF HYPOXIA, CYANIDE, AND DDT IN RAINBOW TROUT.
SO DAI V30(01), SEC B, P0355.
DE PHYSIOLOGY (0433).

AN D ADG69-11065.

<76>
AU BAIRD R B. CARMONA L G. JENKINS R L.
IN THE COUNTY SANITATION DISTRICTS OF LOS ANGELES COUNTY, SAN JOSE CREEK WATER QUALITY LABORATORY, WHITTIER, CALIF.
YR 77.
TI THE DIRECT-INJECTION GLC ANALYSIS OF XYLENOLS IN INDUSTRIAL WASTEWATERS.
SO BULL ENVIRON CONTAM TOXICOL. 17. 6. P764-7. JUN 77.
LG EN.
MJ INDUSTRIAL-WASTE: AN.
MN CHROMATOGRAPHY-GAS.
AN M 77222701. 7711.

<77>
AU BAIRD, R. B. KUO, C. L. SHAPIRO, J. S. YANKO, W. A.
IN SAN JOSE CREEK WATER QUAL. LAB. WHITTIER. CALIF.
YR 74.
TI FATE OF PHENOLICS IN WASTE WATER. DETERMINATION BY DIRECT- INJECTION GLC (GAS-LIQUID CHROMATOGRAPHY) AND WARBURG RESPIROMETRY.
SO ARCH. ENVIRON. CONTAM. TOXICOL. 2. P165-78. 1974.
LG EN.
DE PHENOL DETN WASTEWATER. CRESOL DETN WASTEWATER. WASTEWATER ANALYSIS PHENOL CRESOL.
AN C 08112068114.

<78>
AU BAKER, C. D. CLARK, E. W. JESERNIG, W. V. HUETHER, C. H.
IN SHERWIN-WILLIAMS CO. COVINGTON. VA.
YR 73.
TI RECOVERY OF P-CRESOL FROM PROCESS EFFLUENT.
SO AICHE SYMP. SER. 69. P165-6. 1973.
LG EN.
DE CRESOL RECOVERY WASTEWATER. ACTIVE CARBON CRESOL WASTEWATER. SULFIDE OXIDN CRESOL WASTEWATER. AIR POLLUTION CONTROL CRESOL WASTEWATER.
AN C 08120126443.

<79>
AU BAKKER, G.
IN CENT. LAB. DUTCH STATE MINES. GELEEN. NETH.
YR 77.
TI ANAEROBIC DEGRADATION OF AROMATIC COMPOUNDS IN THE PRESENCE OF NITRATE.
SO FEMS MICROBIOL. LETT. 1. P103-7. 1977.
LG EN.
DE PHENOL NITRATE ANAEROBE BACTERIA. AROM COMPD NITRATE ANAEROBE BACTERIA.
AN C 08705035623.

<80>
AU BALAYANTS, G. A.
IN USSR.
YR 69.
TI EFFECT OF INDUSTRIAL EFFLUENTS FROM A SLAG DUMP OF THE ALTYN- TOPKAN PLANT ON POLLUTION OF GROUND WATERS OF THE AKHANGARAN RIVER VALLEY.
SO GIDROGEOL. INZH. GEOL. ARIDNOI ZONY SSSR. 9. P37-44. 1969.
LG RS.
DE SLAG DUMP WATER POLLUTION. GROUNDWATER POLLUTION SLAG DUMP. SULFATE GROUNDWATER SLAG DUMP. COPPER GROUNDWATER SLAG DUMP. ZINC GROUNDWATER SLAG DUMP. IRON GROUNDWATER SLAG DUMP. PHENOL GROUNDWATER SLAG DUMP.
AN C 08126175699.

<81>
AU BALOGA, J M. HUTTO, F B, JR. MERRILL, E I.
IN JOHNS-MANVILLE RESEARCH AND ENGINEERING CENTER, MANVILLE NJ.
YR 69.
TI A SOLUTION TO THE PHENOLIC POLLUTION PROBLEM IN FIBER GLASS PLANTS: A PROGRESS REPORT.
SO SEE CITATION NO. 71-1TF-0102 PP. 124-127, 1969.
LG EN.
AB NONE.
DE FIBERGLASS, DIATOMITE, FILTRATION, INDUSTRIAL WASTES, PHENOL, WATER RECLAMATION, RESIN MATERIALS.
AN P 7006934.

<82>
AU BALOGH, B. WILSON, D. M. CHRISTIANSEN, P. BURLINGAME, A. L.
IN SPACE SCI. LAB. UNIV. CALIFORNIA. BERKELEY. CALIF.
YR 73.
TI 17.ALPHA.(H) HOPANE IDENTIFIED IN OIL SHALE OF THE GREEN RIVER FORMATION (EOCENE) BY CARBON-13 NMR.

SO NATURE (LONDON). 242. P603-5. 1973.
LG EN.
DE OIL SHALE BITUMEN HOPANE.
AN C 07912068860.

<83>
AU BANGERT, V. VOGT, M.
IN MAINZ. GER.
YR 75.
TI PHENOL PERCOLATION IN THE DEEPER GROUND WATER OF THE WATER WORK PARKINSEL, LUDWIGSHAFEN, AT THE RIVER RHINE.
SO GAS- WASSERFACH, WASSER - ABWASSER. 116. P537-40. 1975.
LG GE.
DE PHENOL POLLUTION GROUNDWATER.
AN C 08602008472.

<84>
AU BANSAL K M. FESSENDEN R W.
YR 75.
TI PULSE RADIOLYSIS STUDIES OF THE OXIDATION OF PHENOLS BY SULFATE ION IN AQUEOUS SOLUTION.
SO RADIAT RES. 62 (3). 542.
DE ABSTRACT CONDUCTOMETRY OPTICAL PULSE METHODS.
AN B 76055655.

<85>
AU BANSAL K M. FESSENDEN R W.
IN RADIATION RESEARCH LABORATORIES, MELLON INSTITUTE OF SCIENCE, CARNEGIE-MELLON UNIVERSITY, PITTSBURGH, PENNSYLVANIA.
YR 76.
TI PULSE RADIOLYSIS STUDIES OF THE OXIDATION OF PHENOLS BY SO4- AND BR2- IN AQUEOUS SOLUTIONS.
SO RADIAT RES. 67. 1. P1-8. JUL 76.
LG EN.
MJ BROMINE.
MN ANIONS. SOLUTIONS. (NON-NIH-SUP).
AN M 76245047. 7611.

<86>
AU BARANOVA L N. DIKUN P P. OSTROUMOVA I N. TIMOSHINA L A.
YR 76.
TI POSSIBILITY OF TISSUE ACCUMULATION AND ELIMINATION OF 3,4- BENZPYRENE FROM THE BODIES OF FISH.
TR O VOZMOZHNOSTI NAKOPLENIIA V TKANIAKH I VYVEDENIIA 3,4-BENZPIRENA IZ ORGANIZMA RYB.
SO VOPR ONKOL. 22. 11. P102-5. 1976.
LG RS.
MJ BENZOPYRENES: ME. TROUT: ME.
MN ANIMAL.
AN M 77106558. 7705.

<87>
AU BARK L S. COOPER R L. WHEATSTONE K C.
YR 72.
TI THE DETERMINATION OF ORGANIC BASES IN CARBONIZATION EFFLUENTS.
SO WATER RES. 6 (1). 117-126.
DE PYRIDINE QUINOLINE BASES AROMATIC AMINES CHROMATOGRAPHY.
AN B 54028433.

<88>
AU BARK, L. S. LIM, B. S.
IN DEP. CHEM. APPL. CHEM. UNIV. SALFORD. SALFORD/LANCS. ENGL.
YR 73.
TI POLAROGRAPHIC DETERMINATION OF TRACE AMOUNTS OF CYANIDE.
SO WATER RES. 7. P1209-13. 1973.
LG EN.
DE CYANIDE DETN INDIRECT POLAROG. COPPER POLAROG CYANIDE DETN. WATER ANALYSIS CYANIDE. SEWAGE ANALYSIS CYANIDE.
AN C 07914087140.

<89>
AU BARKLEY, D. J. INGLES, J. C.
IN EXT. MET. DIV. DEP. ENERGY, MINES, RESOURC. OTTAWA. CAN.
YR 70.
TI COLORIMETRIC SOLVENT-EXTRACTION PROCEDURE FOR THE DETERMINATION OF CYANIDE IN GOLD-MILL EFFLUENTS AND RECEIVING WATERS.
PG 40 PP.
LG EN.
DE GOLD MILLS EFFLUENTS CYANIDE. CYANIDE DETN GOLD CYANIDATION. CYANIDATION GOLD CYANIDE DETN. COLORIMETRIC DETN CYANIDE. SOLVENT EXTN CYANIDE DETN.
AN C 07318091029.

<90>
AU BARNETT, C J. KONTOGIANNIS, J E.
IN JOHNS HOPKINS UNIV. SCHOOL OF HYGIENE AND PUBLIC HEALTH DEPT. OF PATHOBIOLOGY, 615 N. WOLFE ST. BALTIMORE, MD 21205.
YR 75.
TI THE EFFECT OF CRUDE OIL FRACTIONS ON

THE SURVIVAL OF A TIDEPOOL COPEPOD, TIGRIOPUS CALIFORNICUS.
SO ENVIRONMENTAL POLLUTION, 8(1): 45-54, JAN. 1975.
LG EN.
AB NONE.
ID BENZENE, DIESEL OIL, TIGRIOPUS CALIFORNICUS.
DE FUEL OILS, GASOLINE, KEROSENE, MARINE ORGANISMS, MORTALITY, OIL POLLUTION, PETROLEUM, TOXICITY.
AN P 7503467.

<91>

AU BARNSLEY E A.
IN DEPARTMENT OF BIOCHEMISTRY, MEMORIAL UNIVERSITY OF NEWFOUNDLAND, ST. JOHN'S, NEWFOUNDLAND.
YR 75.
TI THE BACTERIAL DEGRADATION OF FLUORANTHENE AND BENZOALPYRENE.
SO CAN J MICROBIOL. 21. 7. P1004-8. JUL 75.
LG EN.
MJ BENZOPYRENES: ME.
MN BIODEGRADATION. ME. SPECIES-SPECIFICITY.
AN M 75207023.

<92>

AU BARTLE K D. ELSTUB J. NOVOTNY M. ROBINSON R J.
IN DEPARTMENT OF PHYSICAL CHEMISTRY, UNIVERSITY OF LEEDS, LEEDS, GREAT BRITAIN.
YR 77.
TI USE OF A MODIFIED TENAX GC COLUMN PACKING FOR THE DIRECT GAS CHROMATOGRAPHIC ANALYSIS OF PHENOLS IN WATER AT THE PPM LEVEL.
SO J CHROMATOGR. 135. 2. P351-8. 21 MAY 77.
LG EN.
MJ CHROMATOGRAPHY-GAS: MT. WATER-POLLUTANTS-CHEMICAL: AN.
AN M 77207347. 7710.

<93>

AU BARTLEY, T. R. HATTRUP, A. R.
IN BUREAU OF RECLAMATION, DENVER, COLO. ENGINEERING AND RESEARCH CENTER.
YR 75. 19P.
TI ACROLEIN RESIDUES IN IRRIGATION WATER AND EFFECTS ON RAINBOW TROUT.
PR PC$3.50/MF$2.25.
AB STUDIES WERE CONDUCTED ON THE COLUMBIA BASIN PROJECT, WASHINGTON, TO DETERMINE THE CONCENTRATIONS OF ACROLEIN IN IRRIGATION WATER AT SEVERAL SAMPLING STATIONS DURING 20 APPLICATIONS OF THE HERBICIDE FOR AQUATIC WEED CONTROL AND AT THE BUREAU'S CARTER LAKE, COLORADO AQUATIC WEED TEST STATION TO FIND OUT THE EFFECTS OF SIMULATED ACROLEIN TREATMENT ON RAINBOW TROUT. ANALYSIS OF SAMPLES OF TREATED IRRIGATION WATER SHOWS THAT THE ACTUAL ACROLEIN CONCENTRATIONS NEAR APPLICATION SITES AGREE WITH THE COMPUTED LEVELS AND THAT THE CONCENTRATIONS DECLINE GRADUALLY AS THE TREATED WATER MOVES DOWNSTREAM.
MJ WATER-POLLUTION, ACROLEINS, HERBICIDES, IRRIGATION, FISHES.
MN TROUT, RESIDUES, CONCENTRATION-COMPOSITION, AQUATIC-WEEDS, TOXICITY, TABLES-DATA, COLUMBIA-BASIN, CARTER-LAKE, WASHINGTON-STATE, COLORADO .
ID WATER-POLLUTION-EFFECTS-ANIMALS, IRRIGATION-WATER, COLUMBIA-BASIN-PROJECT, NTISDIBR.
AN N PB-249 933/3SL.

<94>

AU BARZ W.
YR 75.
TI DEGRADATION OF AROMATIC AND HETERO CYCLIC PLANT SUBSTANCES BY CELL SUSPENSION CULTURES.
SO PLANTA MED. SUPPL. 117-133.
DE MICROBIAL PATHWAYS NUCLEOTIDES COENZYMES RING FISSION REACTIONS PHENOLASE.
AN B 76054458.

<95>

IN BATTELLE COLUMBUS LABS. OHIO.
YR 71. 541P*.
TI WATER QUALITY CRITERIA DATA BOOK. VOLUME 3: EFFECTS OF CHEMICALS ON AQUATIC LIFE. SELECTED DATA FROM THE LITERATURE THROUGH 1968.
NT SEE ALSO PB-208 988 AND PB-208 987.
AV 8050-GWV-05/71. V. 3.
PR PC-GPO/MF$0.95-NTIS.
AB ORIGINAL DATA FROM MORE THAN 500 TECHNICAL PUBLICATIONS CONCERNING THE SPECIFIC EFFECTS OF CHEMICALS ON INDIVIDUALS SPECIES OF AQUATIC BIOTA WERE COLLECTED AND SUMMARIZED IN A UNIFORM FORMAT. ALPHABETICAL ASSEMBLY OF THE DATA BY CHEMICAL ALLOWS RAPID ACCESS TO CONSIDERABLE DETAILED INFORMATION. A SPECIES INDEX FACILITATES SEARCH FOR

INFORMATION ON THE TOXICITY OF CHEMICALS TO INDIVIDUAL AQUATIC SPECIES. THE DETAILS OF MAJOR PROCEDURES IN LABORATORY BIOASSAY AND FIELD ASSESSMENT OF CHEMICAL TOXICITY IN WATER ARE DISCUSSED. FRESHWATER AND MARINE PROCEDURES ARE INCLUDED. A TOTAL OF 961 REFERENCES WERE USED. (AUTHOR).
MJ WATER-POLLUTION, TOXICOLOGY, AQUATIC-BIOLOGY, WATER-POLLUTION.
MN INORGANIC-COMPOUNDS, ORGANIC-COMPOUNDS, TABLES-DATA, BIOASSAY, FISH, BIOCHEMICAL-OXYGEN-DEMAND, INDUSTRIAL-WASTES, INDICATOR-SPECIES, TEMPERATURE, SOURCES, DISSOLVED-GASES, OXYGEN, METALS, ORGANIC-WASTES, PESTICIDES, CHLORINE- ORGANIC-COMPOUNDS, PHENOLS, CYANIDES.
ID WATER-POLLUTION-EFFECTS-ANIMALS, WATER-POLLUTION-EFFECTS-PLANTS.
AN N PB-213 210/8.

<96>

IN BATTELLE COLUMBUS LABS. OHIO.
YR 71. 94P.
TI AN INVESTIGATION OF TECHNIQUES FOR REMOVAL OF CYANIDE FROM ELECTROPLATING WASTES.
NT WATER POLLUTION CONTROL RESEARCH SERIES.
AV 12010EIE-11/71.
PR PC-GPO/MF$0.95-NTIS.
AB INCREASINGLY STRINGENT STREAM DISCHARGE REGULATIONS HAVE PROMPTED AN ASSESSMENT OF THE CURRENT TECHNOLOGY AVAILABLE FOR APPLICATION TO THE METAL FINISHING WASTE TREATMENT PROBLEM, SPECIFICALLY IN REGARD TO SMALLER OPERATIONS. EXPERIMENTAL LABORATORY AND BENCH SCALE STUDIES WERE THEN CONDUCTED ON SEVERAL UNCONVENTIONAL WASTEWATER TREATMENT METHODS, INCLUDING ION FLOTATION, ACTIVATED CARBON ADSORPTION, ACIDIFICATION VOLATILIZATION, AND SOLVENT EXTRACTION. A DEMONSTRATION PILOT PLANT STUDY WAS ALSO CONDUCTED ON THE ACTIVATED CARBON PROCESS EMPLOYING ACTUAL RINSE WATERS FROM A ZINC CYANIDE PLATING OPERATION. THE PILOT SCALE ACTIVATED CARBON SYSTEM WAS OPERATED AT 99% EFFICIENCY OF CYANIDE REMOVAL, WHILE PROVIDING FOR THE COMPLETE RECOVERY AND REGENERATION OF COPPER. COST ESTIMATES FOR CARBON SORPTION PROCESS ARE GIVEN. (AUTHOR).
MJ INDUSTRIAL-WASTE-TREATMENT, ELECTROPLATING, WATER-POLLUTION, INDUSTRIAL-WASTES, CYANIDES, INDUSTRIAL-WASTES-TREATMENT, ACTIVATED-CARBON, INDUSTRIAL-WASTE-TREATMENT.
MN FLOTATION, ZINC-INORGANIC-COMPOUNDS, VAPORIZING, PILOT-PLANTS, PERFORMANCE-EVALUATION, CHEMICAL-ENGINEERING, REGENERATION-ENGINEERING, COST-ESTIMATES, CAPITAL- COSTS, OPERATING-COSTS.
ID WATER-POLLUTION-CONTROL, ZINC-CYANIDES.
AN N PB-208 210.

<97>

AU BAUCH, HEINRICH. BURCHARD, HARRY. ARSOVIC, HANS M.
IN WUPPERTAL-ELBERFELD. GER.
YR 70.
TI OZONE AS OXIDANT FOR PHENOL DEGRADATION IN AQUEOUS SOLUTIONS.
SO GESUNDH.-ING. 91. P258-62. 1970.
LG GE.
DE OZONE DEGRDN PHENOLS. PHENOLS DEGRDN OZONE. DEGRDN PHENOLS OZONE. OXIDN PHENOLS OZONE. BENZOATES PHENOLS DEGRDN. WATER PHENOLS DEGRDN.
AN C 07407031625.

<98>

AU BAUDIN, G. DARRAS, R. ROTH, E.
IN CEN. COMMIS. ENERG. AT. FONTENAY-AUX-ROSES. FR.
YR 73.
TI ANALYTICAL METHODS FOR THE STUDY OF WATER POLLUTION.
PG 18 PP.
LG FR.
DE ANALYTICAL METHOD WATER POLLUTION. GAS CHROMATOG WATER POLLUTION. FLUORIMETRY WATER POLLUTION. CYANIDE DETN WATER. NITRITE DETN WATER. ATP DETN WATER. ATOMIC ABSORPTION WATER POLLUTION. SPECTROG WATER POLLUTION. NEUTRON ACTIVATION WATER POLLUTION.
AN C 08214089806.

<99>

AU BEAM, H. W. PERRY, J. J.
IN DEP. MICROBIOL. NORTH CAROLINA STATE UNIV. RALEIGH. N. C.
YR 73.
TI COMETABOLISM AS A FACTOR IN MICROBIAL DEGRADATION OF CYCLOPARAFFINIC HYDROCARBONS.
SO ARCH. MIKROBIOL. 91. P87-90. 1973.

LG EN.
DE PARAFFIN CYCLOHEXANE METAL
MICROORGANISM. ALKANANE METAB
CYCLOPARAFFIN MICROBIAL.
AN C 07903015640.

<100>
AU BEAM, HERBERT W.
IN NORTH CAROLINA STATE UNIV. RALEIGH.
N. C.
YR 73.
TI MICROBIAL METABOLISM OF
CYCLOPARAFFINIC HYDROCARBONS.
PG 58 PP.
LG EN.
AV UNIV. MICROFILMS, ANN ARBOR, MICH.
ORDER NO. 74-18,976.
DE PARAFFIN CYCLIC SOIL MICROORGANISM.
HYDROCARBON METAB SOIL
MICROORGANISM.
AN C 08123148230.

<101>
AU BEAUCHAMP, J J. HERBES, S E.
IN OAK RIDGE NATIONAL LAB.
ENVIRONMENTAL SCIENCES DIV. OA
RIDGE, TN 37830.
YR 77.
TI TOXIC INTERACTION OF MIXTURES OF TWO
COAL CONVERSION EFFLUENT COMPONENTS
(RESORCINOL AND 6- METHYLQUINOLINE)
TO DAPHNIA MAGNA.
SO BULLETIN OF ENVIRONMENTAL
CONTAMINATION AND TOXICOLOGY, 17(1):
25-32, JAN. 1977.
LG EN.
AB NONE.
ID 6-METHYLQUINOLINE, COAL CONVERSION,
RESORCINOL.
DE INDUSTRIAL EFFLUENTS, ZOOPLANKTON,
CHEMICAL POLLUTANTS, TOXICANTS,
WATER POLLUTANTS.
AN P 7703262.

<102>
AU BEISEMBAEVA, F. G. AMRIN, K. R.
AMANGEL'DIN, S. K.
IN USSR.
YR 72.
TI PROTECTING THE NURA RIVER FROM
POLLUTION FROM HARMFUL COMPOUNDS OF
BY-PRODUCT COKING PRODUCTION.
SO VOP. GIG. TR. PROFZABOL. MATER.
NAUCH. KONF. P45-6. 1972.
LG RS.
AV FILIN, A. P.
DE COKING BYPRODUCT RIVERWATER
POLLUTION. PHENOL POLLUTION
RIVERWATER.
AN C 08124158379.

<103>
AU BELEVTZEV, A. N. MAKSIMENKO, YU. L.
IN USSR.
YR 75.
TI STUDIES ON OXIDATION PROCESSES OF
CYANIDES AND PHENOLS IN WASTE AND
NATURAL WATERS BY USING CHLORINE
DIOXIDE.
SO USA/USSR SYMP. PHYS.-CHEM. TREAT.
(WASTE WATERS) MUNIC. IND. SOURCES,
(PAP.). P105-10. 1975.
LG EN.
DE CHLORINE DIOXIDE WASTE WATER
TREATMENT. CYANIDE OXIDN CHLORINE
DIOXIDE. PHENOL OXIDN CHLORINE
DIOXIDE. OXIDN CYANIDE PHENOL
CHLORINE DIOXIDE.
AN C 08622161830.

<104>
AU BELKIN, D. I. KRAVCHENKO, G. V.
ROZKIN, M. YA. LITVINENKO, I. I.
IN USSR.
YR 76.
TI ULTRAVIOLET SPECTROSCOPIC ANALYSIS
OF AQUEOUS ACETALDEHYDE AND
FORMALDEHYDE SOLUTIONS.
SO VESTN. KHAR'KOV. POLITEKHN. IN- TA.
P71-2. 1976.
LG RS.
DE ACETALDEHYDE DETN FORMALDEHYDE SOLN
UV. PHOTOMETRY ACETALDEHYDE
FORMALDEHYDE DETN.
AN C 08708062161.

<105>
AU BELOUSOV, YU. A.
IN YAROSLAV. PEDAGOG. INST. YAROSLAVL.
USSR.
YR 72.
TI MORPHOLOGICAL CHANGES IN SOME FISH
ORGANS DURING POISONING.
SO VLIYANIE PESTITS. DIKIKH ZHIVOTN.
P41-5. 1972.
LG RS.
AV VORONOVA, L. D.
DE ACETONITRILE TOXICITY FISH. HEART
ACETONITRILE TOXICITY. BRAIN
ACETONITRILE TOXICITY. LIVER
ACETONITRILE TOXICITY. GILL
ACETONITRILE TOXICITY.
AN C 08025141567.

<106>
AU BELVEDERE G. METRICO L.
YR 67.
TI A QUICK METHOD FOR THE DETERMINATION OF BENZENE AND ITS HOMOLOGS IN REFLUX WATERS.
TR METODO RAPIDO PER LA DETERMINAZIONE DEL BENZOLO ED OMOLOGHI NELLE ACQUE REFLUE.
SO MED LAV. 58. 4. P286-9. APR 67.
LG IT.
MJ BENZENE: AN.
MN CHROMATOGRAPHY-GAS.
AN M 69110696.

<107>
AU BELYAEV, I. I. SHKODICH, P. E. RAKUSHINA, E. P.
IN USSR.
YR 72.
TI POLLUTION OF WATER RESERVOIRS OF THE GORKI REGION BY CARCINOGENIC SUBSTANCES.
SO NEKOT. ITOGI IZUCH. ZAGRYAZNENIYA VNESH. SREDY KANTSEROGEN. VESHCHESTVAMI. P40-3. 1972.
LG RS.
DE BENZOPYRENE WASTEWATER REMOVAL. POLLUTION WATER BENZOPYRENE.
AN C 08012063611.

<108>
AU BELYAKOVA, T. M. TREFILOVA, N. YA. TEPLITSKAYA, T. A.
IN USSR.
YR 75.
TI BITUMINOUS SUBSTANCES AND 3,4-BENZOPYRENE IN GEOCHEMICAL LANDSCAPES OF THE NORTHERN CASPIAN SEA REGION.
SO LYUMIN. BITUMINOLOGIYA. P165-76, 186-91. 1975.
LG RS.
AV FLOROVSKAYA, V. N.
DE BITUMINOUS MATERIAL POLLUTION CASPIAN SEA. BENZOPYRENE SOIL WATER POLLUTION CASPIAN.
AN C 08618123975.

<109>
AU BENEDEK P. HOCK B. KADAR L. PUSKAS M. RYMORZ P.
YR 75.
TI REQUIRED EFFICIENCY OF THE BUDAPEST HUNGARY WASTE WATER TREATMENT PLANTS APPROACH TO DETERMINE ASSIMILATIVE CAPACITY OF THE HUNGARIAN STRETCH OF THE DANUBE.
SO WATER RES. 9 (7). 617-622.
DE RAJKA CZECHOSLOVAKIA WEST GERMANY AUSTRIA ORGANIC POLLUTION WATER QUALITY PHENOLS.
AN B 60040182.

<110>
AU BENIJTS F. VERSICHELE D.
IN STATE UNIVERSITY OF GHENT, BELGIUM.
TI THE ROLE OF WATER-SEDIMENT INTERACTION, IN THE OSTEND SLUICEDOCK WITH REGARD TO THE TOXICITY OF POLLUTANTS TO INVERTEBRATE LARVAE. PP. 221-34.
SO IN: KOEMAN JH, STRIK JJ, ED. SUBLETHAL EFFECTS OF TOXIC CHEMICALS ON AQUATIC ANIMALS. AMSTERDAM, ELSEVIER SCIENTIFIC, 1975. WA 689 S941 1975.
LG EN.
MJ CRUSTACEA: DE. WATER-POLLUTANTS-CHEMICAL: TO.
MN ANIMAL: (ANIMAL). CHROMATOGRAPHY-GAS. DE. WATER-POLLUTANTS-CHEMICAL: AN.
AN M 76191649. 7609.

<111>
AU BENVILLE P E JR. KORN S.
IN NATL. MAR. FISH. SERV. SOUTHW. FISH. CENT. TIBURON LAB. TIBURON, CALIF. 94920, USA.
YR 77.
TI THE ACUTE TOXICITY OF 6 MONO CYCLIC AROMATIC CRUDE OIL COMPONENTS TO STRIPED BASS MORONE- SAXATILIS AND BAY SHRIMP CRANGON- FRANCISCORUM.
SO CALIF FISH GAME. 63 (4). 204-209.
LG EN.
DE BENZENE TOLUENE ETHYL BENZENE XYLENE.
AN B 65037102.

<112>
AU BERDUGO V. HARRIS R P. O'HARA S C.
IN ISR. OCEANOGR. LIMNOL. RES. LTD. HAIFA LAB. P.O. BOX 1793, HAIFA, ISR.
YR 77.
TI THE EFFECT OF PETROLEUM HYDRO CARBONS ON REPRODUCTION OF AN ESTUARINE PLANKTONIC COPEPOD IN LABORATORY CULTURES.
SO MAR POLLUT BULL. 8 (6). 138-143.
LG EN.
DE EURYTEMORA-AFFINIS NAPHTHALENE.
AN B 65024510.

<113>

AU BERENTSVEIG, V. V. RUDENKO, A. P.
IN MOSK. GOS. UNIV. IM. LOMONOSOVA.
MOSCOW. USSR.
YR 75.
TI COMBINED OXIDATION OF BENZENE AND
STANNOUS CHLORIDE BY MOLECULAR
OXYGEN IN A WATER-ACETONE SOLUTION.
SO NEFTEKHIMIYA. 15. P272-5. 1975.
LG RS.
DE OXIDN COMBINED BENZENE STANNOUS
CHLORIDE. OXIDN BENZENE AQ ACETONE.
AN C 08307058291.

<114>

AU BEREZIN I V. BONARTSEVA G N.
CL'SINSKAIA N L. VOROB'EVA L I.
ERGOROV N S.
YR 75.
TI FORMATION OF PRIMARY ALCOHOLS AND
PALMITIC ACID IN THE MICROBIOLOGICAL
OXIDATION OF HEXADECANE.
TR OBRAZOVANIE PERVICHNYKH SPIRTOV I
PAL'MITINOVOI KISLOTY PRI
MIKROBIOLOGICHESKOM OKISLENII
GEKSADEKANA.
SO PRIKL BIOKHIM MIKROBIOL. 11. 5.
P653-6. SEP-OCT 75.
LG RS.
MJ ALCOHOLS: BI. PALMITIC-ACIDS: BI,
(PALMITIC-ACID).
MN ARTHROBACTER: ME. CORYNEBACTERIUM:
ME. ME. TIME- FACTORS.
AN M 76052770.

<115>

AU BERGAN T. LYSTAD A.
YR 72.
TI EVALUATION OF PHENOLICS BY A
QUANTITATIVE TECHNIQUE.
SO ACTA PATHOL MICROBIOL SCAND SECT B:
MICROBIOL IMMUNOL. 80 (1). 71-78.
DE BACTERIA FUNGI REGRESSION ANALYSIS
DISINFECTANTS FUNGICIDES.
AN B 54030704.

<116>

AU BERGOLD, ORM.
IN CAMPIONE. SWITZ.
YR 71.
TI DETOXIFICATION OF TOXIC INDUSTRIAL
EFFLUENTS.
SO WASSER, LUFT BETR. 15. P98-101.
1971.
LG GE.
DE METAL IONS REMOVAL. CYANIDE REMOVAL
WASTE WATER. INDUSTRIAL WASTES
COMBINED PURIFN.
AN C 07504024992.

<117>

AU BERNOVSKAYA, N. GUBERGRITS, M.
KIRSO, UUVE.
IN INST. KHIM. TALLIN. USSR.
YR 71.
TI KINETICS OF THE BIOCHEMICAL
OXIDATION OF PHENOLS OF DIFFERENT
STRUCTURE. 1. DEGRADATION ON CLAY
ADAPTED TO PHENOL.
SO EESTI NSV TEAD. AKAD. TOIM. KEEM.
GEOL. 20. P21-5. 1971.
LG RS.
DE SOIL PHENOLS OXIDN PSEUDOMONAS.
BACTERIA PHENOLS OXIDN CLAY.
AN C 07423121699.

<118>

AU BERRY, WILLIAM O. BRAMMER, J. D.
IN DEP. ZOOL. UNIV. VERMONT.
BURLINGTON. VT.
YR 77.
TI TOXICITY OF WATER-SOLUBLE GASOLINE
FRACTIONS TO FOURTH-INSTAR LARVAE OF
THE MOSQUITO AEDES AEGYPTI L.
SO ENVIRON. POLLUT. 13. P229-34. 1977.
LG EN.
DE GASOLINE FRACTION TOXICITY MOSQUITO
LARVA. PETROLEUM COMPONENT TOXICITY
MOSQUITO LARVA. BENZENE TOXICITY
MOSQUITO LARVA. TOLUENE TOXICITY
MOSQUITO LARVA. XYLENE TOXICITY
MOSQUITO LARVA.
AN C 08719146649.

<119>

AU BERTRAND J C. DOUX H J. AZOULAY E.
IN LABORATOIRE DE STRUCTURE ET FONCTION
DES BIOMEMBRANES, U.E.R. DE LUMINY,
MARSEILLE, FRANCE.
YR 76.
TI HYDROCARBON METABOLISM IN A MARINE
BACTERIUM.
TR METABOLISME DES HYDROCARBURES CHEZ
UNE BACTERIE MARINE.
SO BIOCHIMIE. 58. 7. P843-54. 1976.
LG FR.
MJ ALCALIGENES: ME.
MN ALCOHOL-OXIDOREDUCTASES: ME.
ALDEHYDES: ME. FATTY-ACIDS: ME.
OSMOLAR-CONCENTRATION. SODIUM-
DODECYL-SULFATE: PD.
AN M 77022305. 7702.

<120>

AU BERTRAND J C. MUTAFSCHIEV S.

HENKEL H G. BAZIN H. AZOULAY E.
IN LABORATOIRE DE STRUCTURE ET FONCTION DES BIOMEMBRANES, CNRS DE LUMINY, MARSEILLE FRANCE.
YR 76.
TI ISOLATION AND STUDY OF A NEW MARINE BACTERIUM GROWING ON HYDROCARBONS. I. PHYSIOLOGICAL STUDY (AUTHOR'S TRANSL).
TR ISOLEMENT ET ETUDE D'UNE BACTERIE MARINE SE DEVELOPPANT SUR HYDROCARBURES. I. CARACTERES PHYSIOLOGIQUES.
SO ANN MICROBIOL (PARIS). 127B. 3. P373-91. OCT 76.
LG FR.
MJ ALCALIGENES: ME.
MN ALCALIGENES: CL, UL. WATER-POLLUTION-CHEMICAL.
AN M 77132845. 7706.

<121>
AU BERTSCH W. ANDERSON E. HOLZER G.
IN DEPARTMENT OF CHEMISTRY, UNIVERSITY OF ALABAMA, UNIVERSITY, ALA. 35486 (U.S.A.).
YR 75.
TI TRACE ANALYSIS OF ORGANIC VOLATILES IN WATER BY GAS CHROMATOGRAPHY-MASS SPECTROMETRY WITH GLASS CAPILLARY COLUMNS.
SO J CHROMATOGR. 112. P701-18. 29 OCT 75.
LG EN.
MJ CHROMATOGRAPHY-GAS. WATER-POLLUTANTS-CHEMICAL: AN.
MN ABSORPTION. AN.
AN M 76046438.

<122>
AU BESCH W K. KEMBALL A. MEYER-WAARDEN K. SCHARF B.
YR 76.
TI A BIOLOGICAL MONITORING SYSTEM EMPLOYING RHEO TAXIS OF FISH.
SO CAIRNS, JOHN JR. K. L. DICKSON AND G. F. WESTLAKE (ED.). ASTM (AMERICAN SOCIETY FOR TESTING AND MATERIALS) SPECIAL TECHNICAL PUBLICATION, NO. 607. BIOLOGICAL MONITORING OF WATER AND EFFLUENT QUALITY. SYMPOSIUM. BLACKSBURG, VA. USA, NOV. 2-4, 1975. 246P. ILLUS. AMERICAN SOCIETY FOR TESTING AND MATERIALS: PHILADELPHIA, PA. USA. (RECD 1977) 56-74.
DE CARP DDT MERCURY CHLORIDE GASOLINE PHENOL TOXICITY BEHAVIOR WATER POLLUTION.
AN B 77083443.

<123>
AU BESPAMYATOV, O. K. KVYATKOVSKII, A. N. ROSHCHIN, E. K. ATYAKSHEVA, L. F.
IN USSR.
YR 73.
TI DECONTAMINATION OF CYANIDE-CONTAINING WASTE WATERS OF CONCENTRATION PLANTS BY OZONIZATION WITH SEPARATE USE OF NONFERROUS METALS.
SO TR. N.-I. I PROEKT. IN-T PO OBOGASHCH. RUD TSVET. MET. KAZMEKHANOBR. P95-100. 1973.
LG RS.
DE CYANIDE WASTEWATER OZONATION.
AN C 08326209215.

<124>
AU BETTS P M. FLEEKER J R.
YR 75.
TI DECOMPOSITION OF 4 AMINO PYRIDINE IN SOIL.
SO PROC N D ACAD SCI. 29 (1). 2.
DE ABSTRACT BACTERIA PESTICIDE DEGRADATION.
AN B 76016554.

<125>
AU BEVERIDGE E G. TALL D.
YR 69.
TI THE METABOLIC AVAILABILITY OF PHENOL ANALOGUES TO BACTERIUM NCIB 8250.
SO J APPL BACTERIOL. 32 (3). 304-411.
DE BACTERIAL GROWTH CARBON SOURCE.
AN B 51021319.

<126>
AU BEYCHOK, MILTON R.
IN FLUOR CORP. LOS ANGELES. CALIF.
YR 70.
TI TRENDS IN TREATING PETROLEUM REFINERY WASTES.
SO IND. PROCESS DES. WATER POLLUT. CONTR. PROC. WORKSHOP, 2ND. P54-61. 1970.
LG EN.
DE REFINERY WASTES TREATING. WASTES REFINERY TREATING. HYDROTREATING REFINERY POLLUTION. COOLING WATER REFINERY POLLUTION. PHENOLS REFINERY POLLUTION. WELLS DISPOSAL WASTES.
AN C 07412055866.

<127>
AU BHAGAT B P. SINHA S P.
YR 75.

TI TOXIC AND MUTAGENIC EFFECT OF FORMALDEHYDE.
SO GENETICS. 80 (3 PART 1). S13.
DE ABSTRACT DROSOPHILA-MELANOGASTER LARVA PUPA DEVELOPMENT FECUNDITY.
AN B 76011063.

<128>

AU BHATIA, K.
IN CARNEGIE-MELLON UNIV. MELLON INST. OF SCIENCE. CENTER FOR SPECIAL STUDIES, PITTSBURGH, PA 15213.
YR 73.
TI DETERMINATION OF TRACE PHENOL IN AQUEOUS SOLUTION BY AQUEOUS LIQUID CHROMATOGRAPHY.
SO ANALYTICAL CHEMISTRY, 45(8): 1344-1347, JULY 1973.
LG EN.
AB NONE.
ID TRACE PHENOL.
DE WATER POLLUTANTS, POLLUTANT ANALYSIS, LIQUID CHROMATOGRAPHY, AROMATIC COMPOUNDS.
AN P 7403449.

<129>

AU BHATTACHARYA S. MUKHERJEE S.
YR 75.
TI VARIATIONS IN THE KIDNEY PEROXIDASE ACTIVITY IN FISHES EXPOSED TO SOME INDUSTRIAL POLLUTANTS.
SO INDIAN SCI CONG ASSOC PROC. 62. (RECD 1976) 157.
DE ABSTRACT OPHICEPHALUS-PUNCTATUS CLARIAS-BATRACHUS THYROXINE BIOSYNTHESIS SODIUM SULFIDE PHENOL COPPER SULFATE.
AN B 76080603.

<130>

AU BIINO, LUCIANO.
IN FAC. ECON. COMMER. UNIV. GENOVA. GENOA. ITALY.
YR 69.
TI CHRONOPOTENTIOMETRIC STUDY OF FORMALDEHYDE IN FISH FLESH.
SO SCI. ALIMENT. 15. P307-11. 1969.
LG IT.
DE FISH AUTOLYSIS FORMALDEHYDE. AUTOLYSIS FISH FORMALDEHYDE. FORMALDEHYDE FISH AUTOLYSIS. CHRONOPOTENTIOMETRY FISH. ENZYMES FISH ALDEHYDES.
AN C 07225131216.

<131>

AU BILAI, V. I. KOVAL, E. Z.
IN INST. MICROBIOL. VIROL. KIEV. USSR.
YR 74.
TI GROWTH OF FUSARIA WITH ASSIMILATION OF HYDROCARBONS.
SO MIKROBIOL. ZH. (KIEV). 36. P587- 94. 1974.
LG UK.
DE FUSARIUM HYDROCARBON METAB. PARAFFIN METAB FUSARIUM.
AN C 08209053947.

<132>

AU BILLS T D. MARKING L L. CHANDLER J H JR.
YR 77.
TI FORMALIN ITS TOXICITY TO NONTARGET AQUATIC ORGANISMS PERSISTENCE AND COUNTERACTION.
SO U S FISH WILDL SERV INVEST FISH CONTROL. 73. 1-7.
DE ONCORHYNCHUS-TSHAWYTSCHA SALMO-GAIRDNERI SALMO-SALAR SALVELINUS-NAMAYCUSH ICTALURUS-MELAS ICTALURUS-PUNCTATUS LEPOMIS-CYANELLUS LEPOMIS-MACROCHIRUS MICROPTERUS-DOLOMIEUI MICROPTERUS-SALMOIDES PALAEMONETES-KADIAKENSIS CYPRIDOPSIS-SP CORBICULA- LEANA HELISOMA-SP NOTONECTA-SP.
AN B 78033548.

<133>

AU BITKOVA, N. A. KOGAN, S. S.
IN USSR.
YR 71.
TI CORRECTION FOR REAGENT IMPURITY AND USAGE DURING THE ANALYSIS OF CHLOROFORM EXTRACTS FROM GROUND WATERS.
SO METOD. ISSLED. OBL. IZUCH. ORG. VESHCHESTVA PODZEMN. VOD NEFTEGAZONOS. OBL. 10. P62-3. 1971.
LG RS.
AV BARS, E. A.
DE GROUND WATER VOLATILE ORGS DETN. PHENOL DETN GROUND WATER. PETROLEUM GROUND WATER ANAL. CHLOROFORM EXT ORGS GROUND WATER.
AN C 07618103586.

<134>

AU BJORNDAL, HAKAN. BOMAN, BENGT. SOLYOM, PETER.
IN INST. VATTEN- LUFTVARDSFORSK. STOCKHOLM. SWED.
YR 75.

TI CONTINUOUS MONITORING OF ACUTE TOXICITY IN WASTE WATER.
SO NORDFORSK, MILJOEVARDSSEKR. PUBL. 9. P393-6. 1975.
LG SS.
DE TOXIC SUBSTANCES MONITORING WASTEWATER. COPPER BIOL MONITORING WASTEWATER. CYANIDE BIOL MONITORING WASTEWATER. PH BIOL MONITORING WASTEWATER.
AN C 08602008299.

<135>

AU BLAHA J.
YR 76.
TI NONEXPERIMENTAL METHOD OF CHEMICAL ANALYSIS OF METALS COMPLEX FORMING REAGENTS SOLUTION IN WATER.
SO WATER RES. 10 (9). 813-814.
DE POLLUTION GENERAL SYSTEM EQUATION CYANIDE HEAVY METALS.
AN B 63023382.

<136>

AU BLAHA, J.
IN STATE TEXTILE RESEARCH INST. CENTRE FOR RESEARCH AND APPLICATION OF IONIZED RADIATION, BRNO, CZECHO.
YR 76.
TI MATHEMATICAL ANALYSIS OF THE CHEMICAL SYSTEM "CYANIDE-HEAVY METALS" IN WATER--DETERMINATION OF COMPONENTS AND TOXICITY OF THE SYSTEM--I: THE THEORETICAL SOLUTION.
SO WATER RESEARCH, 10(9): 815-819, 1976.
LG EN.
AB NONE.
ID HYDROXYL TEST.
DE CYANIDES, MATHEMATICAL ANALYSIS, HEAVY METALS, TOXIC MATERIALS, WATER POLLUTANTS.
AN P 7700267.

<137>

AU BLAHA, JAN.
IN CENT. RES. APPL. IONIZED RADIAT. STATE TEXT. RES. INST. BRNO. CZECH.
YR 76.
TI MATHEMATICAL ANALYSIS OF THE CHEMICAL SYSTEM "CYANIDE-HEAVY METALS" IN WATER - DETERMINATION OF COMPONENTS AND TOXICITY OF THE SYSTEM. II. SOLUTION BY COMPUTERS.
SO WATER RES. 10. P821-8. 1976.
LG EN.
DE COMPUTER PROGRAM METAL WATER. CYANIDE WATER COMPUTER PROGRAM.
AN C 08604021474.

<138>

AU BLAZY, PIERRE.
IN CENT. VALORISATION MINERAIS. EC. NATL. SUPER. GEOL. APPL. PROSPECT. MINIERE. NANCY. FR.
YR 70.
TI POLLUTION AND RECOVERY OF WATER IN THE MINING INDUSTRY.
SO SCI. TERRE. 15. P293-305. 1970.
LG FR.
DE MINING INDUSTRY WASTE WATER. ORE DRESSING WASTE WATER. PHENOL WASTE WATER. AMINE HYDROCHLORIDE WASTE WATER. TERPENE WASTE WATER. TALL OIL WASTE WATER.
AN C 07720130360.

<139>

AU BLEVINS W T.
YR 72.
TI STUDIES ON THE GROWTH OF BACTERIA ON HYDRO CARBONS AND RELATED SUBSTRATES.
SO DISS ABSTR INT B SCI ENG. 32 (9). 5341-B.
DE THESIS ABSTRACT MYCOBACTERIUM-VACCAE PROPANE.
AN B 72098468.

<140>

AU BLEVINS, W. T. PERRY, J. J.
IN DEP. MICROBIOL. NORTH CAROLINA STATE UNIV. RALEIGH. N. C.
YR 72.
TI METABOLISM OF PROPANE, N-PROPYLAMINE, AND PROPIONATE BY HYDROCARBON-UTILIZING BAACTERIA.
SO J. BACTERIOL. 112. P513-18. 1972.
LG EN.
DE PROPANE METAB BACTERIA. PROPYLAMINE METAB BACTERIA. PROPIONATE METAB BACTERIA. BACTERIA METAB PROPANE PROPIONATE.
AN C 07723149519.

<141>

AU BOLDINA Z N.
YR 71.
TI CHROMATOGRAPHIC SEPARATION AND DETERMINATION OF BENZOL AND ISOPROPYLBENZOL IN WATER.
TR KHROMATOGRAFICHESKOE RAZDELENIE I OPREDELENIE BENZOLA I IZOPROPILBENZOLA V VODE.
SO GIG SANIT. 36. 9. P69-70. SEP 71.

LG RS.
MJ BENZENE: AN. WATER-POLLUTION.
MN WATER-POLLUTION-CHEMICAL.
AN M 72115683.

<142>

AU BOLDINA, Z. N.
IN MOSK. NAUCH.-ISSLED. INST. GIG. IM. ERISMANA. MOSCOW. USSR.
YR 67.
TI DETERMINATION OF SMALL CONCENTRATIONS OF PROPYLBENZENE AND ISOPROPYLBENZENE IN RESERVOIR WATER.
SO MATER. NAUCH.-PRAKT. KONF. MOLODYKH GIG. SANIT. VRACHEI, 11TH. P15-17. 1967.
LG RS.
AV SHITSKOVA, A. P.
DE PROPYLBENZENES DETNS WATERS. WATERS PROPYLBENZENES DETNS.
AN C 07206024368.

<143>

AU BOLLAG, JEAN M. CZAPLICKI, EDWARD J. MINARD, ROBERT D.
IN DEP. AGRON. PANNSYLVANIA STATE UNIV. UNIVERSITY PARK. PA.
YR 75.
TI BACTERIAL METABOLISM OF 1- NAPHTHOL.
SO J. AGRIC. FOOD CHEM. 23. P85-90. 1975.
LG EN.
DE NAPHTHOL METAB BACTERIA. WATER BACTERIA NAPHTHOL METAB.
AN C 08221133672.

<144>

AU BONARTSEVA, G. A. TAPTYKOVA, S. D. VOROB'EVA, L. I. KRAINOVA, O. A. BRYUKHACHEVA, N. L.
IN BIOL.-POCHV. FAK. MOSK. GOS. UNIV. IM. LOMONOSOVA. MOSCOW. USSR.
YR 73.
TI AEROBIC METABOLISM OF PROPIONIC ACID BACTERIA.
SO MIKROBIOLOGIYA. 42. P765-71. 1973.
LG RS.
DE RESPIRATION ENZYME PROPIONIBACTERIUM. NAPHTHOQUINONE PROPIONIBACTERIUM. CYTOCHROME PROPIONIBACTERIUM.
AN C 08009045497.

<145>

AU BONELLI E J. TAYLOR P A. MORRIS W J.
YR 75.
TI MASS FRAGMENTOGRAPHY GAS CHROMATOGRAPHY MASS SPECTROMETRY IN THE ANALYSIS OF HAZARDOUS ENVIRONMENTAL CHEMICALS.
SO INT LAB. SEPT/OCT 19-28.
DE WATER POLLUTION PESTICIDES VINYL CHLORIDE CARCINOGENS ORGANICS HEXA DECANE EXTRACTION CHLORO FLUORO CARBONS.
AN B 76055219.

<146>

AU BONEY, A. D.
IN DEP. BOT. UNIV. GLASGOW. GLASGOW. SCOT.
YR 74.
TI AROMATIC HYDROCARBONS AND THE GROWTH OF MARINE ALGAE.
SO MAR. POLLUT. BULL. 5. P185-6. 1974.
LG EN.
DE ALGAE GROWTH STIMULATION HYDROCARBON. BENZIDINE STIMULATION ALGAE GROWTH. METHYLANTHRACENE STIMULATION GROWTH. CHRYSENE STIMULATION ALGAE GROWTH. ANTITHAMNION GROWTH STIMULATION HYDROCARBON. CARCINOGEN AROM HYDROCARBON ALGAE GROWTH.
AN C 08411070151.

<147>

AU BONOLI, LUCIANO. WITHERSPOON, PAUL A.
IN IST. RIC. "G. DONEGANI". MONTECATINI EDISON S.P.A. NOVARA. ITALY.
YR 69.
TI DIFFUSION OF PARAFFIN, CYCLOPARAFFIN AND AROMATIC HYDROCARBONS IN WATER AND SOME EFFECTS OF SALT CONCENTRATION.
SO ADVAN. ORG. GEOCHEM. PROC. INT. MEET. 4TH. P373-84. 1969.
LG EN.
AV SCHENCK, P. A.
DE DIFFUSION PARAFFIN WATER. CYCLOPARAFFIN DIFFUSION WATER. AROM HYDROCARBON DIFFUSION WATER.
AN C 07618104086.

<148>

AU BORIES, GEORGES. TULLIEZ, JACQUES. PELTIER, JEAN C. FLECKINGER, ROBERT.
IN LAB. RECH. ADDITIFS ALIMENT. INST. NATL. RECH. AGRON. TOULOUSE. FR.
YR 76.
TI CHANGES OF THE PARAFFINIC AND NAPHTHENIC HYDROCARBON AS WELL AS

THE 3,4-BENZOPYRENE CONTENT IN MUSSELS FROM A COASTAL ZONE POLLUTED BY A FUEL SPILL.
SO C. R. HEBD. SEANCES ACAD. SCI. SER. D. 282. P1641-4. 1976.
LG FR.
DE PETROLEUM SPILL MUSSEL HYDROCARBON. FUEL SPILL MUSSEL HYDROCARBON. BENZOPYRENE MUSSEL FUEL SPILL. WATER POLLUTION FUEL MUSSEL.
AN C 08505029237.

<149>
AU BORIGHEM G. VEREECKEN J.
IN DEP. METALL. ELECTROCHEM. VRIJE UNIV. BRUSS. BRUSSELS, BELG.
YR 78.
TI STUDY OF THE BIO DEGRADATION OF PHENOL IN RIVER WATER.
SO ECOL MODEL. 4 (1). 51-60.
LG EN.
DE BACTERIA.
AN B 65038996.

<150>
AU BORKOWSKI, BOGDAN.
IN POL.
YR 70.
TI RESULTS OF SEMI-COMMERCIAL SCALE INVESTIGATIONS ON CATALYTIC OXIDATION OF EFFLUENTS.
SO INT. GAS CONF. 11TH. P23 PP. 1970.
LG EN.
DE CATALYTIC OXIDN EFFLUENT. OXIDN EFFLUENT CATALYTIC. PHENOLIC IMPURITIES OXIDN EFFLUENT. AMMONIA REMOVAL EFFLUENT. HYDROGEN CYANIDE REMOVAL EFFLUENT. GASWORKS EFFLUENTS TREATMENT.
AN C 07418090925.

<151>
AU BORNEFF J.
YR 73.
TI POLLUTION OF OUR WATER AND ITS EFFECT ON DRINKING WATER CONDITION.
TR DIE VERUNREINIGUNG UNSERER GEWASSER UNH IHR EINFLUSS AUF DIE BESCHAFFENHEIT DES TRINKWASSERS.
SO THER GGW. 112. 1. P7-25. JAN 73.
LG GE.
MJ WATER-POLLUTION.
MN CARCINOGENS. WATER-SUPPLY.
AN M 73142918.

<152>
AU BORNEFF, J.
IN HYG. INST. UNIV. MAINZ. MAINZ. GER.
YR 74.
TI POLLUTION OF GROUND AND SURFACE WATER BY ORGANIC SUBSTANCES IN ATMOSPHERIC AEROSOLS.
SO INFORMATIONSBL. FOED. EUR. GEWAESSERSCHUTZ. 21. P33-45. 1974.
LG GE.
DE REVIEW PESTICIDE GROUNDWATER. SURFACE WATER PESTICIDE REVIEW. POLYCHLORINATED BIPHENYL SURFACE WATER REVIEW.
AN C 08318151671.

<153>
AU BORODIN, K. A.
IN OMSK. GOS. MED. INST. IM. KALININA. OMSK. USSR.
YR 72.
TI MAXIMUM PERMISSIBLE CONCENTRATION OF ANILINE IN RESERVOIR WATER.
SO MATER. NAUCH. SESS. POSVYASHCH. 50-LETIYU OBRAZOV. SSSR, OMSK. GOS. MED. INST. P802-4. 1972.
LG RS.
AV GOVOROV, V. P.
DE ANILINE ASCORBATE LEUKOCYTE THROMBOCYTE BLOOD.
AN C 08117100367.

<154>
AU BOWDRE J H. KRIEG N R.
YR 74.
TI WATER QUALITY MONITORING BACTERIA AS INDICATORS.
SO VA POLYTECH INST STATE UNIV WATER RESOUR RES CENT BULL. (69). 1- 20.
DE SPIRILLUM-VOLUTANS FISH INDUSTRIAL EFFLUENT TOXICITY WATER POLLUTION HEAVY METALS CETYL PYRIDINIUM CHLORIDE ANILINE MOTILITY CESSATION DARK FIELD MICROSCOPY.
AN B 58046416.

<155>
AU BOWLING, T. J. SHEEHAN, W. D. DELFINO, J. J.
IN ENVIRON. SCI. DIV. IND. BIO-TEST LAB. NORTHBROOK. ILL.
YR 74.
TI QUANTITATIVE RECOVERY OF TRACE AMOUNTS OF CYANIDE IN SURFACE WATERS USING A MODIFIED SERFASS DISTILLATION PROCEDURE.
SO ENVIRON. LETT. 6. P25-9. 1974.
LG EN.
DE CYANIDE DETN SURFACEWATER SERFASS DISTN. SURFACEWATER ANALYSIS CYANIDE

SERFASS DISTN.
AN C 08022124355.

<156>
AU BOWMER K H. LANG A R G. HIGGINS M L. PILLAY A R. TCHAN Y T.
YR 74.
TI LOSS OF ACROLEIN FROM WATER BY VOLATILIZATION AND DEGRADATION.
CLEAR
SO WEED RES. 14 (5). 325-328.
DE HERBICIDE AIR SCRUBBING EVAPORATION.
AN B 59021571.

<157>
AU BRADACS, LEOPOLD K. KANDLER, WILHELM. SCHEIDBACH, UTE.
IN ABT. FORSCH. QUAL. VER. OESTERR. EISEN- UND STAHLWERKE A.-G. LINZ. AUSTRIA.
YR 72.
TI DETERMINATION OF PHENOL CONCENTRATION OF LIGHT OIL USED FOR PHENOL REMOVAL FROM COKE OVEN PLANT EFFLUENTS.
SO ERDOEL KOHLE, ERDGAS, PETROCHEM. BRENNST.-CHEM. 25. P189-91. 1972.
LG GE.
DE PHENOL DETN COKING EFFLUENT. LIGHT OIL PHENOL DETN. PYRIDINE PHENOL DETN.
AN C 07704022630.

<158>
AU BRADLEY, C F. REED, P R.
IN CHROMALYTICS CORP. ROUTE 82, UNIONVILLE, PA 19375.
YR 76.
TI THE DETERMINATION OF ORGANIC POLLUTANTS IN WATER IN PPB LEVELS WITH A PRECONCENTRATION TECHNIQUE.
SO 1976 PITTSBURGH CONFERENCE ON ANALYTICAL CHEMISTRY AND APPLIED SPECTROSCOPY: ABSTRACTS. PITTSBURGH, PA. PITTSBURGH CONFERENCE ON ANALYTICAL CHEMISTRY AND APPLIED SPECTROSCOPY, (1976?). NO. 272.
LG EN.
AB NONE.
ID PHENOLS, DICHLOROETHANE, DICHLOROPROPANE, CHLOROFORM.
DE ORGANIC COMPOUNDS, GAS CHROMATOGRAPHY, AROMATIC COMPOUNDS, WATER POLLUTION MEASUREMENTS, WATER POLLUTANTS.
AN P 7604239.

<159>
AU BRADLEY, EUGENE B. FRENZEL, CHARLES A.
IN DEP. OF ELEC. ENG. UNIV. OF KENTUCKY, LEXINGTON, KY.
YR 70.
TI EXPLOITATION OF LASER RAMAN SPECTROSCOPY FOR DETECTION AND IDENTIFICATION OF MOLECULAR WATER POLLUTANTS.
SO WATER RES. 4. P125-8. 1970.
LG EN.
DE LASER RAMAN SPECTROSCOPY POLLUTANTS. RAMAN SPECTROSCOPY WATER POLLUTANTS. SPECTROSCOPY RAMAN WATER POLLUTANTS. BENZENE WATER RAMAN SPECTROSCOPY.
AN C 07318091020.

<160>
AU BRADWAY D E. SHAFIK T.
IN PESTICIDES AND TOXIC SUBSTANCES EFFECTS LABORATORY, NATIONAL ENVIRONMENTAL PROTECTION AGENCY, RESEARCH TRIANGLE PARK, NORTH CAROLINA.
YR 77.
TI ELECTRON CAPTURE GAS CHROMATOGRAPHIC ANALYSIS OF THE AMINE METABOLITES OF PESTICIDES: DERIVATIZATION OF ANILINES.
SO J CHROMATOGR SCI. 15. 8. P322-8. AUG 77.
LG EN.
MJ ANILINE-COMPOUNDS: UR, (ANILINE-CPDS). HERBICIDES: ME.
MN HERBICIDES-CARBAMATE: ME. INDICATORS-AND-REAGENTS.
AN M 77249986. 7712.

<161>
AU BRENNIMAN G. HARTUNG R. WEBER W J JR.
YR 76.
TI A CONTINUOUS FLOW BIOASSAY METHOD TO EVALUATE THE EFFECTS OF OUTBOARD MOTOR EXHAUSTS AND SELECTED AROMATIC TOXICANTS ON FISH.
SO WATER RES. 10 (2). 165-169.
DE CARASSIUS-AURATUS AQUATIC ORGANISMS LEAD TOLUENE 1 3 5 TRI METHYL BENZENE XYLENE POLLUTANTS.
AN B 62011369.

<162>
AU BREZONIK P L.
YR 74.
TI CONTINUOUS MONITORING, AUTOMATED ANALYSIS, AND SAMPLING PROCEDURES.

SO J WATER POLLUT CONTROL FED. 46. 6. P1100-9. JUN 74.
LG EN.
MJ WATER-SUPPLY.
MN REVIEW. COLORIMETRY. OXYGEN-CONSUMPTION. BIOLOGICAL-ASSAY. RADIOACTIVITY.
AN M 74299705.

<163>

AU BRIZOVA E. POPL M. COUPEK J.
IN INST. CHEM. TECHNOL. 166 28 PRAGUE 6, CZECH.
YR 77.
TI USE OF THE SORBENT SPHERON SE IN THE ANALYSIS OF TRACE AMOUNTS OF IMPURITIES IN WATER.
SO J CHROMATOGR. 139 (1). 15-20.
LG EN.
DE TOLUENE M CRESOL UV ABSORBING AROMATIC HYDRO CARBON PESTICIDE.
AN B 65017514.

<164>

AU BROCKSEN, ROBERT W. BAILEY, HOWARD T.
IN NATIONAL MARINE FISHERIES SERVICE, TIBURON, CALIF. TIBURON FISHERIES LAB.
YR 73. 10P.
TI RESPIRATORY RESPONSE OF JUVENILE CHINOOK SALMON AND STRIPED BASS EXPOSED TO BENZENE, A WATER-SOLUBLE COMPONENT OF CRUDE OIL.
AV PUB. IN PROCEEDINGS OF CONFERENCE ON PREVENTION AND CONTROL OF OIL SPILLS, WASHINGTON, D.C. 13-15 MAR 73, P783-791.
PR REPRINT.
AB EXPERIMENTS WERE CONDUCTED USING JUVENILE CHINOOK SALMON, ONCORHYNCHUS TSHAWYTSCHA, AND STRIPED BASS, MORONE SAXATILIS. THE FISH WERE EXPOSED TO SUB-LETHAL CONCENTRATIONS OF THE AROMATIC HYDROCARBON BENZENE, FOR PERIODS RANGING FROM 1-96 HOURS. PRIOR TO EXPOSURE, AND AFTER EXPOSURE TO THE BENZENE, RESPIRATION RATES OF INDIVIDUAL FISH WERE MEASURED. RESULTS SHOW INCREASES IN RESPIRATORY RATE UP TO 115 PERCENT ABOVE THAT OF CONTROL FISH AFTER EXPOSURE PERIODS OF 24 HOURS FOR STRIPED BASS AND 48 HOURS FOR CHINOOK SALMON. FISH EXPOSED TO BENZENE CONCENTRATIONS OF 10 PPM FOR PERIODS LONGER THAN THOSE LISTED EXHIBITED A NARCOSIS THAT CAUSED A DECREASE IN RESPIRATORY RATE. THE NARCOTIC STATE INDUCED BY EXPOSURE TO BENZENE WAS SHOWN TO BE REVERSIBLE WHEN THE FISH WERE PLACED IN FRESH WATER AND KEPT FOR PERIODS LONGER THAN 6 DAYS. POSSIBLE BIOCHEMICAL MECHANISMS LEADING TO THIS RESPONSE ARE HYPOTHESIZED. (AUTHOR MODIFIED ABSTRACT).
MJ FISHES, BENZENE, WATER- POLLUTION, BENZENE, OILS, WATER- POLLUTION.
MN TOXICITY, RESPIRATORY-SYSTEM, NARCOSIS, FISHERIES.
ID ONCORHYNCHUS-TSHAWYTSCHA, MORONE-SAXATILIS, OIL-POLLUTION, OIL-SPILLS, NOAA.
AN N COM-73-11089.

<165>

AU BRODERIUS, S J. SMITH, L L, JR. LIND, D T.
IN UNIV. OF MINNESOTA, DEPT. OF ENTOMOLOGY, FISHERIES, AND WILDLIFE, ST. PAUL, MN 55101.
YR 77.
TI CHRONIC EFFECTS OF HYDROGEN CYANIDE ON THE FATHEAD MINNOW.
SO WATER POLLUTION CONTROL FEDERATION. JOURNAL, 49(2): 262- 268, FEB. 1977.
LG EN.
AB NONE.
ID FATHEAD MINNOWS, HYDROGEN CYANIDE.
DE FISH, TOXICITY, WATER POLLUTION, INDUSTRIAL EFFLUENTS, CYANIDES.
AN P 7704160.

<166>

AU BRODERIUS, STEVEN JAMES.
IN OREGON STATE UNIVERSITY (0172) PH.D. 1973, 313PP.
YR 73.
TI DETERMINATION OF MOLECULAR HYDROCYANIC ACID IN WATER AND STUDIES OF THE CHEMISTRY AND TOXICITY TO FISH OF METAL-CYANIDE COMPLEXES.
SO DAI V34(03), SEC B, P1018.
DE CHEMISTRY, GENERAL (0485).
AN D ADG73-21299.

<167>

AU BRODY A W. LYONS K P. KUROWSKI J L. MCGILL J J. WEAVER M J.
YR 71.
TI ANALYSIS AND SOLUBILITY OF DI METHYL ETHER AND DI ETHYL ETHER IN WATER SALINE OILS AND BLOOD.
SO J APPL PHYSIOL. 31 (1). 125-131.

DE CENT-DEPRESS-DRUGS GAS ANALYSIS HEART VAN SLYKE MANOMETRY.
AN B 52115387.

<168>
AU BROOKS, BRIAN W. SMITH, ROY M.
IN CHEM. ENG. DEP. LOUGHBOROUGH UNIV. TECHNOL. LOUGHBOROUGH. ENGL.
YR 73.
TI CATALYTIC OXIDATION OF THIOPHENOL.
SO CHEM. IND. (LONDON). NO. 7. P326. 1973.
LG EN.
DE OXIDN THIOPHENOL CATALYST. COPPER PYRIDINE THIOPHENOL OXIDN. THIOSULFINATE THIOPHENOL OXIDN. BENZENETHIOSULFINATE THIOPHENOL OXIDN .
AN C 07901005085.

<169>
AU BROOKSBANK, P. DAY, M B. GOULDEN, P D.
IN DEPT. OF THE ENVIRONMENT, CANADA CENTRE FOR INLAND WATERS, 867 LAKESHORE RD. P.O. BOX 5050, BURLINGTON, ONT. CAN.
YR 73.
TI DETERMINATION OF SUBMICROGRAM LEVELS OF PHENOL IN WATER.
SO ANALYTICAL CHEMISTRY, 45(14): 2430-2433, DEC. 1973.
LG EN.
AB NONE.
ID PHENOL, SUBMICROGRAM LEVELS.
DE ABSORPTION SPECTROSCOPY, AROMATIC COMPOUNDS, CHEMICAL POLLUTANTS, LABORATORY METHODS, MEASURING METHODS, WATER POLLUTION MEASUREMENTS.
AN P 7500313.

<170>
AU BROWN E R. HAZDRA J J. KEITH L. GREENSPAN I. KWAPINSKI J B. BEAMER P.
YR 73.
TI FREQUENCY OF FISH TUMORS FOUND IN A POLLUTED WATERSHED AS COMPARED TO NONPOLLUTED CANADIAN WATERS.
SO CANCER RES. 33. 2. P189-98. FEB 73.
LG EN.
MJ FISH-DISEASES: OC.
MN ANIMAL. ESCHERICHIA-COLI: IP. ILLINOIS. PETROLEUM: AN. TOLUENE: AN.
AN M 73128320.

<171>
AU BROWN, STEPHEN L. HOLT, BUFORD R. MCCALEB, KIRTLAND E.
IN CENT. RESOURC. ENVIRON. SYST. STUD. STANFORD RES. INST. MENLO PARK. CALIF.
YR 76.
TI SYSTEMS FOR RAPID RANKING OF ENVIRONMENTAL POLLUTANTS. SELECTION OF SUBJECTS FOR SCIENTIFIC AND TECHNICAL ASSESSMENT REPORTS.
PG 270 PP.
LG EN.
DE AIR POLLUTANT RANKING. WATER POLLUTANT RANKING. ENVIRONMENTAL POLLUTANT RANKING. BERYLLIUM ENVIRONMENTAL POLLUTANT RANKING. CYANIDE ENVIRONMENTAL POLLUTANT RANKING. CARBON DISULFIDE ENVIRONMENTAL POLLUTANT RANKING.
AN C 08618126715.

<172>
AU BROWN, VINCENT MAURICE. DALTON, R. A.
IN WATER POLLUT. RES. LAB. STEVENAGE. ENGL.
YR 70.
TI ACUTE LETHAL TOXICITY TO RAINBOW TROUT OF MIXTURES OF COPPER, PHENOL, ZINC, AND NICKEL.
SO J. FISH BIOL. 2. P211-16. 1970.
LG EN.
DE POISONS TROUT TOXICITY. TROUT TOXICITY POISONS. TOXICITY TROUT POISONS. COPPER TROUT TOXICITY. PHENOL TROUT TOXICITY. ZINC TROUT TOXICITY. NICKEL TROUT TOXICITY.
AN C 07323117763.

<173>
AU BROWN, VINCENT MAURICE. JORDAN, D. H. M. TILLER, B. A.
IN WATER POLLUT. RES. LAB. STEVENAGE. ENGL.
YR 69.
TI ACUTE TOXICITY TO RAINBOW TROUT OF FLUCTUATING CONCENTRATIONS AND MIXTURES OF AMMONIA, PHENOL, AND ZINC.
SO J. FISH BIOL. 1. P1-9. 1969.
LG EN.
DE TOXICITY CATIONS PHENOL TROUT. TROUT TOXICITY CATIONS PHENOL. PHENOL TOXICITY TROUT. AMMONIA TOXICITY TROUT. ZINC TOXICITY TROUT.
AN C 07223118885.

<174>

AU BROWNLEE, B. STRACHAN, W. M. J.
IN CANADA CENT. INLAND WATERS. BURLINGTON. ONT.
YR 76.
TI PERSISTENT ORGANIC COMPOUNDS FROM A PULP MILL IN A NEAR-SHORE FRESHWATER ENVIRONMENT.
SO IDENTIF. ANAL. ORG. POLLUT. WATER, (CHEM. CONGR. NORTH AM. CONT.), 1ST. P661-70. 1976.
LG EN.
AV KEITH, LAWRENCE H.
DE PHENOL PULP MILL EFFLUENT. ESTER PULP MILL EFFLUENT. RESIN ESTER PULP MILL EFFLUENT. OCTYL PHTHALATE PULP MILL EFFLUENT. PULP MILL POLLUTION LAKE.
AN C 08614095653.

<175>

AU BRUCE, A. K. MAHONEY, G. F. GERSTEN, D. M. THOMAS, C. C. JR.
IN BIOL. DEP. STATE UNIV. NEW YORK. BUFFALO. N. Y.
YR 73.
TI TOXICITY OF IRRADIATED 1-NAPHTHOL.
SO RADIAT. RES. 53. P295-306. 1973.
LG EN.
DE IRRADN TOXICITY NAPHTHOL. NAPHTHOQUINONE TOXICITY NAPHTHOL IRRADN. SULFHYDRYL INTERACTION NAPHTHOL TOXICITY. RADIOSENSITIZATION BACTERIA NAPHTHOL.
AN C 07821132453.

<176>

AU BRUCHAL, TADEUSZ.
IN WARSAW. POL.
YR 70.
TI EXTRACTIVE DEPHENOLIZING OF CARBONIZATION WATERS IN THE COKING INDUSTRY.
SO KOKS, SMOLA, GAZ. 13. P295-9. 1970.
LG PO.
DE PHENOLS EXTN COKING REVIEW. COKING PHENOLS EXTN REVIEW. REVIEW PHENOLS EXTN COKING. CARBONIZATION WATERS PHENOLS REVIEW.
AN C 07412055967.

<177>

AU BUIKEMA A L JR. CAIRNS J JR. SULLIVAN G W.
YR 74.
TI ROTIFERS AS MONITORS OF HEAVY METAL POLLUTION IN WATER.
SO VA POLYTECH INST STATE UNIV WATER RESOUR RES CENT BULL. (71). 1- 74.
DE PHILODINA-ACUTICORNIS MAGNESIUM CADMIUM CHROMIUM COBALT COPPER LEAD AMMONIUM NICKEL MERCURY SILVER ZINC CHLORIDE PHENOL.
AN B 60028816.

<178>

AU BURROWS W D. ROWE R S.
YR 75.
TI ETHER SOLUBLE CONSTITUENTS OF LANDFILL LEACHED MATERIAL.
SO J WATER POLLUT CONTROL FED. 47 (5). 921-923.
DE FISH MAMMAL WATER POLLUTION WASTE STABILIZATION BASIN DESIGN CHLOROPHYLL PRODUCTION PROPIONIC-ACID ISO BUTYRIC-ACID N BUTYRIC-ACID VALERIC-ACID ACETONE ETHYL ALCOHOL ISO PROPYL ALCOHOL N PROPYL ALCOHOL ISO BUTYL ALCOHOL N BUTYL ALCOHOL.
AN B 60040205.

<179>

AU BUSH, B. DELL'ACQUA, R.
IN N.Y. STATE DEPT. OF HEALTH, DIV. OF LABS. AND RESEARCH, ALBANY, NY 12201.
YR 73.
TI MICRODETERMINATION OF GASOLINE IN POTABLE WATERS BY GAS CHROMATOGRAPHY.
SO INTERNATIONAL JOURNAL OF ENVIRONMENTAL ANALYTICAL CHEMISTRY, 3(2): 141-146, 1973.
LG EN.
AB NONE.
ID HEXANE, PARAFFINS.
DE CONTAMINANT DETECTION, GAS CHROMATOGRAPHY, GASOLINE, GROUND WATER, HYDROCARBONS, PETROLEUM, POTABLE WATERS.
AN P 7500317.

<180>

AU BUTTON D K.
YR 76.
TI THE INFLUENCE OF CLAY AND BACTERIA ON THE CONCENTRATION OF DISSOLVED HYDRO CARBON IN SALINE SOLUTION.
SO GEOCHIM COSMOCHIM ACTA. 40 (4). 435-440.
DE ESTUARINE SEDIMENT DODECANE SOLUBILITY.
AN B 62030529.

<181>
AU CAGLAR M A. THOMPSON A R. HOUSTON C W. ROSE V C.
YR 69.
TI KINETICS OF MICROBIAL OXIDATION OF N HEPTANE PART 1 CHARACTERIZATION OF THE PROCESS.
SO BIOTECHNOL BIOENG. 11 (3). 417- 426.
DE PSEUDOMONAD.
AN B 51010623.

<182>
AU CAHN R P. LI N N.
YR 74.
TI SEPARATION OF PHENOL FROM WASTE WATER BY THE LIQUID MEMBRANE TECHNIQUE.
SO SEP SCI. 9 (6). (RECD 1975) 505-519.
AN B 75051928.

<183>
AU CAIN R B. HOUGHTON C. WRIGHT K A.
YR 74.
TI MICROBIAL METABOLISM OF THE PYRIDINE RING. METABOLISM OF 2- AND 3-HYDROXYPYRIDINES BY THE MALEAMATE PATHWAY IN ACHROMOBACTER SP.
SO BIOCHEM J. 140. 2. P293-300. MAY 74.
LG EN.
MJ ALCALIGENES: ME.
MN AMIDES: ME. CHELATING-AGENTS. DITHIOTHREITOL. (FERRIC-AND-FERROUS-COMPOUNDS).
AN M 75127334.

<184>
AU CAIRNS J JR. MESSENGER D I. CALHOUN W F.
YR 76.
TI INVERTEBRATE RESPONSE TO THERMAL SHOCK FOLLOWING EXPOSURE TO ACUTELY SUBLETHAL CONCENTRATIONS OF CHEMICALS.
SO ARCH HYDROBIOL. 77 (2). 164-175.
DE GONIOBASIS-LIVESCENS PHYSA- INTEGRA LYMNAEA-EMARGINATA CHROMIUM CHLORINE CYANIDE COPPER LEAD PHENOL ZINC ACETIC-ACID MORTALITY HEAT.
AN B 63021337.

<185>
AU CALDER, JOHN A. LADER, JUNE H.
IN FLORIDA STATE UNIV. TALLAHASSEE. DEPT. OF OCEANOGRAPHY. SCIENCE FOUNDATION, WASHINGTON, D.C. OFFICE FOR THE INTERNATIONAL DECADE OF OCEAN EXPLORATION. 407 468.
YR 76. 8P.
TI EFFECT OF DISSOLVED AROMATIC HYDROCARBONS ON THE GROWTH OF MARINE BACTERIA IN BATCH CULTURE.
AV PUB. IN APPLIED AND ENVIRONMENTAL MICROBIOLOGY, V32 N1 P95-101 JUL 76.
PR NOT AVAILABLE NTIS.
AB DISSOLVED AROMATIC HYDROCARBONS WERE FOUND TO DECREASE GROWTH RATE AND MAXIMUM CELL DENSITY OF MARINE BACTERIA IN BATCH CULTURES. THE MAGNITUDE OF THE DECREMENT WAS OBSERVED TO BE A FUNCTION OF CONCENTRATION OF THE HYDROCARBON AND INHERENT TOXICITY. THE INTERENT TOXICITY WAS OBSERVED TO INCREASE INVERSELY WITH SOLUBILITY SUCH THAT NAPHTHALENE AT 100 MICROMETERS CONCENTRATION DEMONSTRATED A TOXIC EFFECT SIMILAR TO BENZOPYRENE AT 0.02 MICROMETERS. A PARTIAL OXIDATION PRODUCT OF NAPHTHALENE WAS FOUND TO BE MORE EFFECTIVE IN DECREASING GROWTH PARAMETERS THAN NAPHTHALENE AT EQUIVALENT CONCENTRATIONS AND TO CAUSE COMPLETE CESSATION OF GROWTH AT THE HIGHER CONCENTRATIONS PERMITTED BY ITS POLAR STRUCTURE.
MJ OIL-POLLUTION, BACTERIA, TOXICITY, MARINE-MICROORGANISMS.
MN AROMATIC-HYDROCARBONS, CRUDE- OIL, NAPHTHALENE, PYRENES, GROWTH.
ID REPRINTS, INTERNATIONAL-DECADE-OF-OCEAN-EXPLORATION, BENZOPYRENES, WATER-POLLUTION-EFFECTS-ANIMALS, NTISIDOE, NTISNSFG.
AN N PB-261 893/2SL.

<186>
AU CALLELY, A. G. JONES, A. M. HUGHES, D. E.
IN DEP. MICROBIOL. UNIV. COLL. CARDIFF. WALES.
YR 73.
TI MICROBIAL DEGRADATION OF STYRENE COPOLYMERS.
SO DEGRADABILITY POLYM. PLAST. (PREPR.) CONF. P13, 3 PP. 1973.
LG EN.
DE STYRENE COPOLYMER BIODEGRDN.
AN C 08518124567.

<187>
AU CAMPBELL, J. H. WASHINGTON, H.
IN CALIFORNIA UNIV. LIVERMORE. LAWRENCE LIVERMORE LAB. AND DEVELOPMENT ADMINISTRATION. 9500007.

YR 76. 23P.
TI PRELIMINARY LABORATORY AND MODELING STUDIES ON THE ENVIRONMENTAL IMPACT OF IN-SITU COAL GASIFICATION.
NT UNDERGROUND COAL GASIFICATION SYMPOSIUM, MORGANTOWN, WEST VIRGINIA, UNITED STATES OF AMERICA (USA), 10 AUG 1976.
PR PC A02/MF A01.
AB A PRELIMINARY LABORATORY AND MODELING STUDY ON THE ENVIRONMENTAL IMPACT OF ''IN-SITU'' COAL GASIFICATION FIELD TESTING IS REPORTED. EXPERIMENTS WERE CONDUCTED ON THE ASPECTS OF GROUND WATER POLLUTION; WATER LEACHING, TRANSPORT, AND DISPERSION OF POLLUTANTS. THE MAJOR INORGANIC CONTAMINANTS LEACHED FROM THE COAL ASH WERE DETERMINED TO BE AL EXP +3, CA EXP +2, AND OH EXP -, WHILE THE PRINCIPAL ORGANIC POLLUTANTS WERE FOUND TO BE PHENOLS. A SIMPLE CALCULATIONAL MODEL IS USED TO PREDICT THE MOVEMENT OF THE POLLUTED GROUND-WATER. THIS MODEL INPUTS INFORMATION FROM LABORATORY EXPERIMENTS FOR THE RATE AT WHICH THE ABOVE POLLUTANTS ARE REMOVED FROM THE GASIFICATION ZONE AND THE DEGREE WITH WHICH THEY ARE SORBED BY THE SURROUNDING COAL. IT WAS DISCOVERED THAT UNGASIFIED COAL HAS A STRONG BENEFICIAL EFFECT ON RETARDING THE DISPERSION OF THE POLLUTANTS. THE PROBLEM OF AIR POLLUTION RESULTING FROM THE FLARING OF THE PRODUCTION GAS WAS ALSO EXAMINED. THE EXTENT OF THE AIR POLLUTION PLUME THAT DEVELOPS FROM THIS FLARING IS PREDICTED USING A SIMPLE COMPUTER MODEL. THESE PREDICTIONS HAVE BEEN CARRIED OUT FOR A SET OF ATMOSPHERIC AND FLARE OPERATING CONDITIONS THAT MAY BE ENCOUNTERED DURING FIELD TESTS. IT WAS DETERMINED THAT THE LLL FIELD EXPERIMENTS WILL ADEQUATELY MEET AIR QUALITY STANDARDS, EVEN UNDER ADVERSE CONDITIONS. (ERA CITATION 02: 000070).
MJ BITUMINOUS-COAL, IN-SITU-GASIFICATION, AIR-POLLUTION, COAL-GASIFICATION, WATER-POLLUTION.
MN ENVIRONMENTAL-EFFECTS, GROUND-WATER, MATHEMATICAL-MODELS, PHENOLS, SORPTIVE-PROPERTIES.
ID ERDA-010900, ERDA-010404, ERDA-010600, NTISERDA.
AN N UCRL-78303.

<188>

AU CANELLI E. MITCHELL D G. PAUSE R W.
YR 76.
TI AN IMPROVED DETERMINATION OF CHEMICAL OXYGEN DEMAND IN WATER AND WASTES BY A SIMPLIFIED ACID DI CHROMATE DIGESTION.
SO WATER RES. 10 (4). 351-355.
DE POLLUTION BCCAENE TOLUENE PYRIDINE COLORIMETRY SPECTROPHOTOMETRY.
AN B 62028550.

<189>

AU CAPENTER A. SIGGIA S. CARTER S.
YR 76.
TI SEPARATION AND OR CONCENTRATION OF PHENOLIC MATERIALS FROM DILUTE AQUEOUS SOLUTIONS.
SO ANAL CHEM. 48 (1). 225-228.
DE N VINYL-2 PYRROLIDINE POLYMER.
AN B 61058589.

<190>

AU CAPONE, WANDA. COTTIGLIA, MAURO. MASCIA, CARLO. MASALA, MARIA L. T.
IN IST. CHIM. FARM. TOSSICOL. UNIV. CAGLIARI. CAGLIARI. ITALY.
YR 76.
TI THEORY OF THE SOURCE AND ACCUMULATION OF 3,4-BENZOPYRENE IN THE FOOD CHAIN.
SO INQUINAMENTO. 18. P35-40. 1976.
LG IT.
DE BENZOPYRENE WATER POLLUTION. PETROLEUM WASTE FOOD CHAIN.
AN C 08605028546.

<191>

AU CARDWELL, RICK D. FOREMAN, DALLAS G. PAYNE, THOMAS R. WILBUR, DORIS J.
IN CHEMICO PROCESS PLANTS CO. EL MONTE, CALIF. ENVIROGENICS SYSTEMS. ENVIRONMENTAL RESEARCH LAB. DULUTH, MINN.
YR 76. 125P.
TI ACUTE TOXICITY OF SELECTED TOXICANTS TO SIX SPECIES OF FISH.
NT FINAL REPT.
PR PC$5.50/MF$2.25.
AB THE RELATIONSHIP BETWEEN MEDIAN LETHAL CONCENTRATION AND EXPOSURE TIME WAS DETERMINED FOR FIVE CHEMICALS AND UP TO SIX SPECIES OF FRESHWATER FISH IN A FLOW-THROUGH SYSTEM. THE LOWEST MEDIAN LETHAL CONCENTRATIONS FOUND WERE 0.114 MG/L

FOR SODIUM CYANIDE, 0.118 MG/L FOR SODIUM PENTACHLOROPHENATE, 2.9 MG/L FOR SELENIUM DIOXIDE, 18.0 MG/L FOR SODIUM ARSENITE, 25.4 MG/L FOR BERYLLIUM SULFATE, AND GREATER THAN 100 MG/L FOR LEAD CHLORIDE. TOXICITY CURVES RELATING MEDIAN LETHAL CONCENTRATION TO EXPOSURE TIME WERE OF THREE TYPES. ONE CURVE, RESEMBLING A RECTANGULAR HYPERBOLA, CHARACTERIZED THE TOXICITY OF SODIUM CYANIDE, WHILE ANOTHER CURVE, SIGMOID IN SHAPE, CHARACTERIZED THE TOXICITY OF SELENIUM DIOXIDE. BOTH TYPES OF CURVES WERE OBSERVED IN TOXICITY TESTS WITH SODIUM PENTACHLOROPHENATE, SODIUM ARSENITE AND BERYLLIUM SULFATE. LINEAR TOXICITY CURVES WERE RECORDED FOR SOME FISH SPECIES EXPOSED TO SELENIUM DIOXIDE, SODIUM ARSENITE AND BERYLLIUM SULFATE, BUT THESE WERE USUALLY ENCOUNTERED WHEN EXPOSURE TIMES WERE LESS THAN 96 HR.

MJ TOXICITY, FISHES.

MN ARSENIC-INORGANIC-COMPOUNDS, SODIUM-INORGANIC-COMPOUNDS, SODIUM-ORGANIC-COMPOUNDS, BIOASSAY, FRESH-WATER-FISHES, TOXICOLOGY, SODIUM-CYANIDE, SELENIUM-OXIDES, EXPOSURE, HALOHYDROCARBONS, LETHAL-DOSAGE, CATFISHES, LEAD-INORGANIC-COMPOUNDS, TROUT, TABLES-DATA, RECOMMENDATIONS, MORTALITY, SENSITIVITY, PHENOLS, WATER-POLLUTION, LEAD-HALIDES, CHLORIDES.

ID BERYLLIUM-SULFATES, BLUEGILLS, ICTALURUS-PUNCTATUS, GOLDFISH, CARASSUIS-AURATUS, FISH-MUCUS, SODIUM-PENTACHLOROPHENOL, ARSENITES, LEAD-CHLORIDES, WATER-POLLUTION-EFFECTS-ANIMALS, NTISEPAORD.

AN N PB-252 488/2SL.

<192>

AU CARLSON, ROBERT M. CARLSON, ROBERT E. KOPPERMAN, HERBERT L.

IN DEP. CHEM. UNIV. MINNESOTA. DULUTH. MINN.

YR 75.

TI DETERMINATION OF PARTITION COEFFICIENTS BY LIQUID CHROMATOGRAPHY.

SO J. CHROMATOGR. 107. P219-23. 1975.

LG EN.

DE HANSCH CORRELATION PARTITION COEFF. CHROMATOG DETN PARTITION COEFF. PHENOL DERIV PARTITION COEFF. ANILINE DERIV PARTITION COEFF. TOXICITY PHENOL AQUATIC SPECIES.

AN C 08301004076.

<193>

AU CARTWRIGHT N J. BROADBENT D A.

YR 74.

TI BACTERIAL ATTACK ON PHENOLIC ETHERS PRELIMINARY STUDIES ON SYSTEMS TRANSPORTING ELECTRONS TO THE SUBSTRATE BINDING COMPONENTS IN BACTERIAL O DEALKYLASES.

SO MICROBIOS. 10 (38-39). 87-96.

DE NOCARDIA-SP PSEUDOMONAS- FLUORESCENS REDUCTASE OXIDASE CYTOCHROME ENZYMES SPECIFICITY 4 METHOXY BENZOATE.

AN B 59004565.

<194>

AU CARUSO, S. C. KOSLOW, J. R.

IN CARNEGIE-MELLON UNIV. PITTSBURGH. PA.

YR 70.

TI CHROMATOGRAPHIC DETECTION OF WATER CONTAMINANTS.

SO IND. WATER ENG. 7. P22-6. 1970.

LG EN.

DE CHROMATOG ORG POLLUTANT WATER. OIL CHROMATOG DETECTION WATER. PHENOL CHROMATOG DETECTION WATER. NAPHTHALENE CHROMATOG DETECTION WATER.

AN C 07224124854.

<195>

AU CASALINI, A. LEONI, A. SALVI, G.

IN STN. SPER. COMBUST. SAN DONATO MILANESE. ITALY.

YR 77.

TI OZONE PURIFICATION OF WASTE WATER CONTAINING PHENOLS: STUDIES ON THE MECHANISM OF OXIDATION.

SO RIV. COMBUST. 31. P92-101. 1977.

LG IT.

DE OZONE WASTEWATER PHENOL. OXIDN PHENOL WASTEWATER.

AN C 08726205972.

<196>

AU CASAPIERI, PETER. SCOTT, ROGER. SIMPSON, EDWARD A.

IN SCI. BR. GREATER LONDON COUNC. LONDON. ENGL.

YR 70.

TI DETERMINATION OF CYANIDE IONS IN WATERS AND EFFLUENTS BY AN AUTO-ANALYZER PROCEDURE.

SO ANAL. CHIM. ACTA. 49. P188-92. 1970.

LG EN.

DE CYANIDES DETN EFFLUENTS. EFFLUENTS CYANIDES DETN. SPECTROPHOTOMETRY CYANIDES DETN. AUTOANALYZER CYANIDES DETN.
AN C 07212058851.

<197>

AU CASTELL C H. SMITH B.
YR 73.
TI MEASUREMENT OF FORMALDEHYDE IN FISH MUSCLE USING TRI CHLORO ACETIC- ACID EXTRACTION AND THE NASH REAGENT.
SO J FISH RES BOARD CAN. 30 (1). 91-98.
DE COD.
AN B 56034733.

<198>

AU CASTELLANOS, E.
IN CAMPSA'S CENTRAL LAB. MADRID, SPAIN.
YR 68.
TI PARAFFIN FOR OIL POLLUTION OF THE SEA.
SO OIL POLLUTION OF THE SEA. INTERNATIONAL CONFERENCE. PROCEEDINGS. BARCLAY-SMITH, P. (ED.). (HELD IN ROME, IT. OCT. 7-9, 1968). SPONSORED BY BRITISH ADVISORY COMMITTEE ON OIL POLLUTION OF THE SEA; ITALIAN NATIONAL COMMITTEE ON OIL POLLUTION OF THE SEA AND NORDIC UNION FOR THE PREVENTION OF OIL POLLUTION OF THE SEA, SWEDEN. 239-247, 1968.
LG EN.
AB NONE.
ID MARINE POLLUTION, PARAFFIN, SOLIDIFICATION OF OIL.
DE OIL REMOVERS, WATER POLLUTION CONTROL.
AN P 7000436.

<199>

AU CATCHPOLE, J. R. COOPER, R. L.
IN BR. COKE RES. ASSOC. CHESTERFIELD/DERBYSHIRE. ENGL.
YR 72.
TI BIOLOGICAL TREATMENT OF CARBONIZATION EFFLUENTS. III. NEW ADVANCES IN THE BIOCHEMICAL OXIDATION OF LIQUID WASTES.
SO WATER RES. 6. P1459-74. 1972.
LG EN.
DE BIOCHEM OXIDN WASTE. COKE OVEN WASTE BIOCHEM OXIDN. PYRUVIC ACID BIOCHEM OXIDN WASTE. THIOCYANATE BIOCHEM OXIDN. CYANIDE BIOCHEM OXIDN .
AN C 07804019942.

<200>

AU CATELANI, DANILO. COLOMBI, ANTONIO.
IN INST. AGRAR. TECH. MICROBIOL. UNIV. MILAN. MILAN. ITALY.
YR 74.
TI METABOLISM OF BIPHENYL. STRUCTURE AND PHYSICOCHEMICAL PROPERTIES OF 2-HYDROXY-6-OXO-6-PHENYLHEXA-2,4-DIENOIC ACID, THE META-CLEAVAGE PRODUCT FROM 2,3-DIHYDROXYBIPHENYL BY PSEUDOMOMAS PUTIDA.
SO BIOCHEM. J. 143. P431-4. 1974.
LG EN.
DE BIPHENYL METAB PSEUDOMONAS.
AN C 08221133453.

<201>

AU CATELANI, DANILO. COLOMBI, ANTONIO. SORLINI, CLAUDIA. TRECANI, VITTORIO.
IN INST. AGRAR. TECH. MICROBIOL. UNIV. MILAN. MILAN. ITALY.
YR 73.
TI METABOLISM OF BIPHENYL. 2-HYDROXY-6-OXO-6-PHENYL-2,4-HEXADIENOATE. META-CLEAVAGE PRODUCT FROM 2,3-DIHYDROXYBIPHENYL BY PSEUDOMONAS PUTIDA.
SO BIOCHEM. J. 134. P1063-6. 1973.
LG EN.
DE BIPHENYL METAB PSEUDOMONAS. BENZOATE DIPHENYL DEGRDN.
AN C 08015078704.

<202>

AU CATTERALL F A. MURRAY K. WILLIAMS P A.
YR 71.
TI THE CONFIGURATION OF THE 1,2-DIHYDROXY-1,2-DIHYDRONAPHTHALENE FORMED IN THE BACTERIAL METABOLISM OF NAPHTHALENE.
SO BIOCHIM BIOPHYS ACTA. 237. 2. P361-4. 18 MAY 71.
LG EN.
MJ NAPHTHALENES: ME.
MN AEROBIOSIS. CELL-FREE-SYSTEM. OXYGEN-CONSUMPTION. STEREOISOMERS.
AN M 71291417.

<203>

AU CAZACEANU, ECATERNIA.
IN INST. IG. BUCHAREST. ROM.
YR 71.
TI METHOD OF DETERMINATION OF LOW PHENOL CONCENTRATIONS IN WATER.
SO LUCR. CONF. NAT. CHIM. ANAL. 3RD. 3.

P299-303. 1971.
LG RO.
DE PHENOL DETN WATER. CATIONIC RESIN PHENOL DETN.
AN C 07622131187.

<204>
AU CENCI G. MOROZZI G.
YR 77.
TI EVALUATION OF THE TOXIC EFFECT OF CADMIUM II ION AND CADMIUM II TETRA CYANIDE ION ON THE GROWTH OF MIXED MICROBIAL POPULATION OF ACTIVATED SLUDGES.
SO SCI TOTAL ENVIRON. 7 (2). 131-143.
DE GLUCOSE UPTAKE ENZYMATIC ACTIVITY.
AN B 64005339.

<205>
AU CERNAKOVA M. HALAMA D.
YR 73.
TI EFFECT OF AROMATIC HYDRO CARBONS ON MICROORGANISMS.
SO FOLIA MICROBIOL. 18 (2). 162.
DE ABSTRACT CANDIDA-LIPOLYTICA RHODOTORULA-MUCILAGINOSA PSEUDOMONAS-SP ZOOGLOEA-SP ACHROMOBACTER-SP BACILLUS-CEREUS NOCARDIA-OPACA TOXICITY BENZENE N ALKANES.
AN B 73098870.

<206>
AU CERNIGLIA C E. BLEVINS W T. PERRY J J.
IN DEPARTMENT OF MICROBIOLOGY, NORTH CAROLINA STATE UNIVERSITY, RALEIGH, NORTH CAROLINA.
YR 76.
TI MICROBIAL OXIDATION AND ASSIMILATION OF PROPYLENE.
SO APPL ENVIRON MICROBIOL. 32. 6. P764-8. DEC 76.
LG EN.
MJ ETHYLENES: ME.
MN ACETATES: ME. MYCOBACTERIUM: EN. PROPANE: ME. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 77086203. 7704.

<207>
AU CERNIGLIA C E. GIBSON D T.
IN DEP. MICROBIOL. UNIV. TEX. AUSTIN, TEX. 78712, USA.
YR 77.
TI METABOLISM OF NAPHTHALENE BY CUNNINGHAMELLA-ELEGANS.
SO APPL ENVIRON MICROBIOL. 34 (4). 363-379.
LG EN.
DE MAMMALIAN METABOLISM DEXTROSE 1 NAPHTHOL 4 HYDROXY-1 TETRALONE 1 4 NAPHTHO QUINONE 1 2 NAPHTHO QUINONE 2 NAPHTHOL TRANS-1 2 DI HYDROXY-1 2 DI HYDRO NAPHTHALENE.
AN B 65023520.

<208>
AU CERNIGLIA C E. PERRY J J.
YR 72.
TI CRUDE OIL DEGRADATION BY MICROBES ISOLATED FROM MARINE ENVIRONMENTS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 72. 3.
DE ABSTRACT FUNGI BACTERIA PENICILLIUM-SP CUNNINGHAMELLA-ELEGANS PARAFFIN ASPHALT.
AN B 73030153.

<209>
AU CERNIGLIA, C. E. PERRY, J. J.
IN DEP. MICROBIOL. NORTH CAROLINA STATE UNIV. RALEIGH. N. C.
YR 75.
TI METABOLISM OF N-PROPYLAMINE, ISOPROPYLAMINE, AND 1,3-PROPANE DIAMINE BY MYCOBACTERIUM CONVOLUTUM.
SO J. BACTERIOL. 124. P285-9. 1975.
LG EN.
DE PROPYLAMINE AMINE DEHYDROGENASE MYCOBACTERIUM.
AN C 08325203633.

<210>
AU CHAIGNEAU, MARCEL. CHASTAGNIER, MADELEINE.
IN SERV. ANAL. GAZ. PARIS. FR.
YR 76.
TI EXTRACTION AND IDENTIFICATION OF HYDROCARBONS DISSOLVED IN WATER.
SO BULL. SOC. CHIM. FR. P40-4. 1976.
LG FR.
DE HYDROCARBON EXTN WATER SOLVENT. CARBON TETRACHLORIDE EXTN WATER. ETHER EXTN WATER. FREON 113 EXTN WATER. CHLOROFORM EXTN WATER.
AN C 08518130270.

<211>
AU CHALAYA, Z. I. MIKHAILOVA, L. S. MASHKEVICH, A. I. EGOREICHENKO, O. A. POLISHCHUK, O. M.
IN USSR.

YR 75.
TI EXTRACTION-CHROMATOGRAPHIC DETERMINATION OF THIOPHENE, ITS CHLORODERIVATIVES, TOLUENE, AND BENZENE IN WASTE WATERS.
SO ZH. ANAL. KHIM. 30. P798-802. 1975.
LG RS.
DE CHLORO THIOPHENE DETN WASTEWATER. THIOPHENE DETN WASTEWATER. BENZENE DETN WASTEWATER. TOLUENE DETN WASTEWATER.
AN C 08404021736.

<212>

AU CHAMBON, P. CHAMBON-MOUGENOT, R. BRINGUIER, J.
IN LAB. REG. HYG. APPL. INST. PASTEUR LYON. LYONS. FR.
YR 70.
TI WATER POLLUTION BY PHENOLS. IDENTIFICATION OF PHENOLS IN WATER BY TLC (THIN LAYER CHROMATOGRAPHY) AFTER COLORED REACTION WITH 4-AMINOANTIPYRINE.
SO REV. INST. PASTEUR LYON. 3. P395-400. 1970.
LG FR.
DE COLORIMETRY CHROMATOG PHENOLS WATER.
AN C 07610049603.

<213>

AU CHANG, R. C. Y.
IN AMES LAB. IOWA. 0305000.
YR 76. 92P.
TI CONCENTRATION AND DETERMINATION OF TRACE ORGANIC POLLUTANTS IN WATER.
NT THESIS.
PR PC A05/MF A01.
AB A METHOD WAS DEVELOPED FOR DETERMINING PHENOLS IN NATURAL WATER, TREATED DRINKING WATER, AND WASTEWATER. THEY ARE DETERMINED BY SELECTIVE SORPTION ON A MACRORETICULAR ANION-EXCHANGE RESIN, ELUTION WITH ACETONE-WATER, CONCENTRATION BY EVAPORATION AFTER EXTRACTION WITH METHYLENE CHLORIDE, AND MEASUREMENT BY GAS CHROMATOGRAPHY. TECHNIQUES ARE GIVEN FOR PREVENTING PHENOL LOSS. COMMON INORGANIC IONS AND MANY ORGANIC SUBSTANCES CAUSE NO INTERFERENCE; NEUTRAL ORGANICS THAT ARE RETAINED BY THE RESIN CAN BE REMOVED BY A METHANOL WASH. THE METHOD GIVES ACCURATE RESULTS FOR PHENOL, ALKYL- AND CHLORO-SUBSTITUTED PHENOLS IN THE PPB TO PPM RANGE. VOLATILE COMPOUNDS, AS WELL AS LESS VOLATILE GAS CHROMATOGRAPHABLE COMPOUNDS CAN ALSO BE DETERMINED. RESIN PURIFICATION, SORPTION COLUMNS PREPARATION, THERMAL DESORPTIONS, THE MINI-SAMPLER, METHOD FOR ANALYSIS OF REAL WATER FOR ORGANICS AND DEVELOPMENT OF ANALYTICAL METHOD ARE PRESENTED. FINALLY, A RAPID METHOD WAS DEVELOPED FOR CONCENTRATING AND DETERMINING HALOMETHANES IN DRINKING WATER. THE HALOMETHANES ARE DETERMINED BY SORPTION ON MINI-SAMPLERS OF MACRORETICULAR RESIN. THE HALOMETHANES SORBED ON RESIN ARE ELUTED WITH TWO MILLILITERS OF METHANOL. HALOMETHANES ARE SEPARATED ON A TENAX-GC COLUMN AND DETERMINED BY ELECTRON CAPTURE GAS CHROMATOGRAPHY. STORAGE OF HALOMETHANES ON THE MINI-SAMPLER WAS STUDIED. REAL WATER SAMPLES WERE ANALYZED. (ERA CITATION 02: 007682).
MJ HALOGENATED-ALICYCLIC- HYDROCARBONS, ORGANIC-COMPOUNDS, PHENOLS.
MN WASTE-WATER, WATER, ADSORPTION, ANIONS, CHEMICAL-ANALYSIS, ERRORS, EVAPORATION, GAS-CHROMATOGRAPHY, ION- EXCHANGE, RESINS.
ID ERDA-400102, ERDA-520200, WATER-POLLUTION-DETECTION, SURFACE-WATERS, POTABLE-WATER, WATER-TREATMENT, WATER-ANALYSIS, TRACE-ELEMENTS, NTISERDA.
AN N IS-T-730.

<214>

AU CHAPMAN P J. HOPPER D J.
YR 68.
TI THE BACTERIAL METABOLISM OF 2,4-XYLENOL.
SO BIOCHEM J. 110. 3. P491-8. DEC 68.
LG EN.
MJ PSEUDOMONAS: ME.
MN ADIPIC-ACIDS: ME. PHTHALIC- ACIDS: ME.
AN M 69078989.

<215>

AU CHAPMAN P J. RIBBONS D W.
IN DEPARTMENT OF BIOCHEMISTRY, COLLEGE OF BIOLOGICAL SCIENCES, UNIVERSITY OF MINNESOTA, ST. PAUL, MINNESOTA 55108.
YR 76.
TI METABOLISM OF RESORCINYLIC COMPOUNDS BY BACTERIA: ALTERNATIVE PATHWAYS FOR RESORCINOL CATABOLISM IN

PSEUDOMONAS PUTIDA.
SO J BACTERIOL. 125. 3. P985-98. MAR 76.
LG EN.
MJ PSEUDOMONAS: ME.
MN CATECHOLS: ME, (CATECHOL). COMPARATIVE-STUDY. ME. UNITED-STATES-GOVERNMENT-SUPPORTED-NIH: (NIH-SUP). UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 76142424. 7607.

<216>
AU CHAPMAN P J. RIBBONS D W.
IN DEPARTMENT OF BIOCHEMISTRY, UNIVERSITY OF MINNESOTA, ST. PAUL, MINNESOTA 55108.
YR 76.
TI METABOLISM OF RESORCINYLIC COMPOUNDS BY BACTERIA: ORCINOL PATHWAY IN PSEUDOMONAS PUTIDA.
SO J BACTERIOL. 125. 3. P975-84. MAR 76.
LG EN.
MJ PSEUDOMONAS: ME.
MN ACETATES: ME. CHEMISTRY. OXYGEN-CONSUMPTION. BI. (NIH-SUP). (NON-NIH-SUP).
AN M 76142423. 7607.

<217>
AU CHEN C W. SELLECK R E.
YR 69.
TI A KINETIC MODEL OF FISH TOXICITY THRESHOLD.
SO J WATER POLLUT CONTR FED. 41 (8 PART 2). R294-R308.
DE LEBISTES-RETICULATUS ZINC CYANIDE.
AN B 51014761.

<218>
AU CHEN C W-C.
YR 69.
TI A KINETIC MODEL OF FISH TOXICITY THRESHOLD.
SO DISS ABSTR B SCI ENG. 29 (9). 3342-B.
DE THESIS ABSTRACT LEBISTES-RETICULATUS ZINC CYANIDE.
AN B 72067665.

<219>
AU CHENG, JOSEPH Y. ANTIA, NAVAL J.
IN FISHERIES RESEARCH BOARD OF CANADA, VANCOUVER LAB. BC.
YR 70.
TI ENHANCEMENT BY GLYCEROL OF PHOTOTROPHIC GROWTH OF MARINE PLANKTONIC ALGAE AND ITS SIGNIFICANCE TO THE ECOLOGY OF GLYCEROL POLLUTION.
SO CANADA. FISHERIES RESEARCH BOARD. JOURNAL, 27(2): 335-346, FEB. 1970.
LG EN.
AB NONE.
ID GROWTH STIMULATORS, ORGANIC POLLUTION.
DE PHYTOPLANKTON, GOUTH RATE, GLYCEROL.
AN P 7004340.

<220>
AU CHEREMISINOFF, P N. HABIB, Y H.
IN CLOSTER, NJ.
YR 73.
TI CYANIDE--AN ASSESSMENT OF ALTERNATIVES FOR WATER POLLUTION CONTROL.
SO WATER & SEWAGE WORKS INCLUDING INDUSTRIAL WASTES, REFERENCE NO. R95, R98-R99, R102-R104, R106-R107, APR. 30, 1973.
LG EN.
AB NONE.
ID CYANIDE.
DE METAL FINISHING INDUSTRY WASTES, TOXICITY, ANIONS, WASTE WATER DISCHARGES, WATER POLLUTION CONTROL.
AN P 7401470.

<221>
AU CHERKINSKII S N. LASKINA V P.
YR 74.
TI THE SIGNIFICANCE OF ISOMERY IN HYGIENIC STANDARDIZATION OF INDUSTRIAL CONTAMINATIONS OF WATER BODIES.
SO GIG SANIT. (3). 6-10.
DE BENZENE DERIVATIVES ALCOHOLS TOXIC EFFECTS.
AN B 59028854.

<222>
AU CHERNOBRIVETS, V. L. ROZENFEL'D, M. G.
IN INST. FIZ. KHIM. KIEV. USSR.
YR 71.
TI CHROMATOGRAPHIC SEPARATION OF AQUEOUS SOLUTIONS OF METHANOL AND FORMALDEHYDE.
SO KHIM. TEKHNOL. (KIEV). P32-4. 1971.
LG RS.
DE GAS CHROMATOG METHANOL FORMALDEHYDE.
AN C 07612067934.

<223>
AU CHESLER, S. N. GUMP, B. H. HERTZ, H. S. MAY, W. E. DYSZEL, S. M. ENAGONIO, D. P.
IN INST. MATER. RES. NATL. BUR. STAND. WASHINGTON. D. C.
YR 76.
TI TRACE HYDROCARBON ANALYSIS: THE NATIONAL BUREAU OF STANDARDS PRINCE WILLIAM SOUND/NORTHEASTERN GULF OF ALASKA BASELINE STUDY.
SO NATL. BUR. STAND. (U. S.), TECH. NOTE. 889. P66 PP. 1976.
LG EN.
DE HYDROCARBON DETN WATER SEDIMENT. SEAWATER HYDROCARBON DETN. MESITYLENE DETN WATER. NAPHTHALENE DETN WATER. PROPYLNAPHTHALENE DETN WATER. PHENANTHRENE DETN WATER.
AN C 08424169436.

<224>
AU CHI C T. HOWELL J A.
YR 76.
TI TRANSIENT BEHAVIOR OF A CONTINUOUS STIRRED TANK BIOLOGICAL REACTOR UTILIZING PHENOL AS AN INHIBITORY SUBSTRATE.
SO BIOTECHNOL BIOENG. 18 (1). 63-80.
DE PSEUDOMONAS MICROBIAL FILM ACTIVITY WALL GROWTH FACTOR OSCILLATORY BEHAVIOR BOTTLENECK MODEL.
AN B 62019556.

<225>
AU CHIAN, E S K. KUO, P P K. FUENTES, R C. COWEN, W F. COOPER, W J.
IN UNIV. OF ILLINOIS, DEPT. OF CIVIL ENGINEERING, ENVIRONMENTAL ENGINEERING, URBANA, IL 61801.
YR 77.
TI DISTILLATION/HEADSPACE/GAS CHROMATOGRAPHIC ANALYSIS FOR VOLATILE POLAR ORGANICS AT PPB LEVEL.
SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, 11(3): 282-285, MAR. 1977.
LG EN.
AB NONE.
ID DISTILLATION HEADSPACE GC, VOLATILE POLAR ORGANIC COMPOUNDS, ETHANOL, METHANOL.
DE LABORATORY METHODS, DISTILLATION, GAS CHROMATOGRAPHY, KETONES, ALCOHOLS, ORGANIC COMPOUNDS, WATER QUALITY CONTROL.
AN P 7704289.

<226>
AU CHIBA, MONITO. KURODA, MASAYUKI.
IN NIPPON BUNSEKI KAGAKU KENKYUJO. JAPAN.
YR 72.
TI WATER ANALYSIS. DETERMINATION OF MERCURY, CHROMIUM, MANGANESE, ARSENIC, CYANIDE IONS, AND SULFIDES.
SO KOGAI BUNSEKI SHISHIN. 5. P83 PP. 1972.
LG JA.
DE REVIEW METAL DETN WATER. MERCURY DETN WATER REVIEW. CHROMIUM DETN WATER REVIEW. MANGANESE DETN WATER REVIEW. ARSENIC DETN WATER REVIEW . CYANIDE DETN WATER REVIEW. SULFIDE DETN WATER REVIEW.
AN C 08202007330.

<227>
AU CHIKIN, YU. M. AKHMETGALEEV, N. M. LEBEDEVA, V. T.
IN USSR.
YR 72.
TI EFFECTIVE USE OF RECYCLED SOLUTIONS AT A FACTORY FOR DECREASING THE CONCENTRATION OF CYANIDE COMPOUNDS IN WASTE WATERS.
SO NAUCH. TR. IRKUTSK. NAUCH.- ISSLED. INST. REDK. TSVET. METAL. NO. 27. P27-30. 1972.
LG RS.
DE CYANIDE REMOVAL RECYCLED WATER.
AN C 07908045413.

<228>
AU CHILD J. WILLETTS A.
IN DEPARTMENT OF BIOLOGICAL SCIENCES, UNIVERSITY OF EXETER, EXETER, U. K.
YR 78.
TI MICROBIAL METABOLISM OF ALIPHATIC GLYCOLS. BACTERIAL METABOLISM OF ETHYLENE GLYCOL.
SO BIOCHIM BIOPHYS ACTA. 538. 2. P316-27. 18 JAN 78.
LG EN.
MJ ETHYLENE-GLYCOLS: ME.
MN CULTURE-MEDIA. ME.
AN M 78080975. 7805.

<229>
AU CHIOU C T. FREED V H. SCHMEDDING D W. KOHNERT R L.
YR 77.
TI PARTITION COEFFICIENT AND BIO ACCUMULATION OF SELECTED ORGANIC CHEMICALS.
SO ENVIRON SCI TECHNOL. 11 (5). 475-

478.
DE RAINBOW TROUT PESTICIDES POLY CHLORINATED BI PHENYL.
AN B 64023329.

<230>
AU CHMIELOWSKI J. KLAPCINSKA B. LABUZEK S. DANCH A. MARCZYNSKI B. MROZOWSKA J. NOWAK E. PALUSINSKA M.
YR 75.
TI KINETICS OF BIO DEGRADATION OF PHENOLIC SUBSTRATES BY ACTIVATED SLUDGE MICROORGANISMS.
SO POL ARCH HYDROBIOL. 22 (2). (RECD 1976) 327-344.
DE PSEUDOMONAS-SPP ACHROMOBACTER- SPP FLAVOBACTERIUM-SPP AEROMONAS-SP VIBRIO-SP ALCALIGENES-SP BACILLUS-SP.
AN B 62010911.

<231>
AU CHOI, SHIN HYUB.
IN N. KOREA.
YR 74.
TI QUANTITATIVE ANALYSIS OF STYRENE BY AQUEOUS IODINE CHLORIDE SOLUTION .
SO PUNSOK HWAHAK. 12. P28-33. 1974.
LG KO.
DE STYRENE ANALYSIS IODINE CHLORIDE.
AN C 08210058138.

<232>
AU CHOLNOKY-PFANNKUCHE, K.
IN NAT. INST. WATER RES. PRETORIA. S. AFRICA.
YR 69.
TI TOXICITY (OF NATURAL WATERS). I.
SO HYDROBIOLOGIA. 33. P209-22. 1969.
LG GE.
DE AMMONIUM CHLORIDE TOXICITY WATER. PHENOL TOXICITY WATER. DIELDRIN TOXICITY WATER. ALGAE TOXICITY POLLUTED WATERS. FISH TOXICITY POLLUTED WATERS.
AN C 07206024360.

<233>
AU CHOLNOKY-PFANNKUCHE, K.
IN NAT. INST. WATER RES. PRETORIA. S. AFRICA.
YR 69.
TI TOXICITY (OF NATURAL WATERS). II. EXPERIMENTS WITH ULOTHRIX TENERRIMA .
SO HYDROBIOLOGIA. 33. P223-36. 1969.
LG GE.
DE ALGAE TOXICITY POLLUTED WATERS. DIELDRIN TOXICITY WATER. PHENOL TOXICITY WATER. ULOTHRIX TENERRIMA NATURAL WATERS.
AN C 07204015578.

<234>
AU CHRISTMAN, R F.
IN UNIV. OF WASHINGTON, DEPT. OF APPLIED CHEMISTRY SEATTLE.
YR 71.
TI ANALYSIS OF ORGANIC POLLUTANTS.
SO SEE CITATION NO. 72-2TB-161 PP. 215-229. 1971.
LG EN.
AB NONE.
ID POLLUTANT ANALYSIS.
DE PHENOL, COD, ORGANIC WASTES.
AN P 7006934.

<235>
AU CHRISWELL C D. CHANG R C. FRITZ J S.
YR 75.
TI CHROMATOGRAPHIC DETERMINATION OF PHENOLS IN WATER.
SO ANAL CHEM. 47. 8. P1325-9. JUL 75.
LG EN.
MJ PHENOLS: AN.
MN CHROMATOGRAPHY-GAS. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP). WATER-SUPPLY: AN.
AN M 75202920.

<236>
AU CHRZANOWSKI, ANDRZEJ. SZANIAWSKA, JOLANTA. FITAK, BOHDAN. HOROSZKIEWICZ, ZBIGNIEW. PACHECKA, JAN. GIOVANOLI-JAKUBCZAK, TERESA . WALCZAK, ELZBIETA. DABALA, HANNA. SPIRYDONOW, ELZBIETA.
IN INST. NAUKI LEKU. AKAD. MED. WARSAW. POL.
YR 75.
TI EVALUATION OF SOME POLLUTANTS IN THE VISTULA AND ITS TRIBUTARIES IN THE DEBLIN VICINITY. IV. NITRITES, NITRATES, CYANIDES, AMMONIA NITROGEN, AND PHENOLS.
SO FARM. POL. 31. P985-8. 1975.
LG PO.
DE NITRITE RIVER POLAND. NITRATE RIVER POLAND. CYANIDE RIVER POLAND. AMMONIA RIVER POLAND. PHENOL RIVER POLAND.
AN C 08518130193.

<237>

AU CHU, CHI-HONG.
IN THE UNIVERSITY OF IOWA (0096) PH.D. 1973, 131PP.
YR 73.
TI AN INVESTIGATION OF THE COLUMN CHROMATOGRAPHIC BEHAVIOR OF THE POROUS SUPPORT XAD-2: SEPARATION OF ORGANIC BASES, PHENOLS, AND STEROIDS.
SO DAI V34(09), SEC B, P4252.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG74-07360.

<238>

AU CHUDOBA, JAN. TUCEK, FERDINAND. LISCHKE, PETER.
IN CHEM. TECHNOL. INST. PRAGUE. CZECH.
YR 75.
TI ISOLATION AND IDENTIFICATION OF THE ORGANIC RESIDUE FROM THE PRODUCTION OF ACTIVATED SLUDGE MICROORGANISMS.
SO Z. WASSER ABWASSER FORSCH. 8. P99-104. 1975.
LG GE.
DE ACTIVATED SLUDGE ANALYSIS. BENZOTHIAZOLE DERIV DETN ACTIVATED SLUDGE . BENZOTHIOPHENE DERIV DETN ACTIVATED SLUDGE. INDANONE DETN ACTIVATED SLUDGE. DIPHENYLAMINE DETN ACTIVATED SLUDGE. PROPYLANILINE DETN ACTIVATED SLUDGE. METHYLISOPROPYLPHENOL DETN ACTIVATED SLUDGE.
AN C 08416111152.

<239>

AU CIAMBELLI, PAOLO. DE SIMONE, VINCENZO. VALENTINO, RAFFAELE.
IN IST. CHIM. UNIV. NAPOLI. NAPLES. ITALY.
YR 76.
TI SINGLE SAMPLE ANAYLSIS OF A MIXTURE OF PERMANENT GASES, WATER, AND AROMATICS.
SO ANN. CHIM. (ROME). 66. P111-16. 1976.
LG EN.
DE ETHYLBENZENE DEHYDROGENATION ANALYSIS GAS CHROMATOG. CARBON OXIDE DETN ETHYLBENZENE DEHYDROGENATION. WATER DETN ETHYLBENZENE DEHYDROGENATION. NITROGEN DETN ETHYLBENZENE DEHYDROGENATION. OXYGEN DETN ETHYLBENZENE DEHYDROGENATION. BENZENE DETN ETHYLBENZENE DEHYDROGENATION. TOLUENE DETN ETHYLBENZENE DEHYDROGENATION. STYRENE DETN ETHYLBENZENE DEHYDROGENATION. BENZALDEHYDE DETN ETHYLBENZENE DEHYDROGENATION.
AN C 08620150125.

<240>

AU CILLIE G G. DAVIES T R. HART O O. HASSETT A J.
IN NATL. INST. WATER RES. P.O. BOX 395, PRETORIA 0001, S. AFR.
YR 77.
TI THE EFFECT OF TOXIC LOADS ON EFFLUENT PURIFICATION SYSTEMS.
SO WATER S A (PRETORIA). 3 (2). 83- 89.
LG EN.
DE MERCURY PHENOL CHROMIUM ORGANO PHOSPHORUS COMPOUND BIOLOGICAL FILTER ROTATING DISC ACTIVATED SLUDGE CILIATES BACTERIA NITRIFICATION LIME FLOTATION PRETORIA SOUTH AFRICA.
AN B 65036596.

<241>

AU CLARK H F. DIAMOND L.
YR 71.
TI COMPARATIVE STUDIES ON THE INTERACTION OF BENZPYRENE WITH CELLS DERIVED FROM POIKILOTHERMIC AND HOMEOTHERMIC VERTEBRATES PART 2 EFFECT OF TEMPERATURE ON BENZPYRENE METABOLISM AND CELL MULTIPLICATION.
SO J CELL PHYSIOL. 77 (3). 385-392.
DE MOUSE HAMSTER CHICK GECKO GEKKO-GECKO AMERICAN TOAD BUFO-AMERICANUS RAINBOW TROUT SALMO-GAIRDNERI.
AN B 52128039.

<242>

AU CLARK R C JR. FINLEY J S. GIBSON G G.
YR 74.
TI ACUTE EFFECTS OF OUTBOARD MOTOR EFFLUENT ON 2 MARINE SHELLFISH.
SO ENVIRON SCI TECHNOL. 8 (12). 1009-1014.
DE MYTILUS-EDULIS OSTREA-LURIDA PHYSIOLOGICAL STRESS GILL DEGENERATION PARAFFIN HYDRO CARBON UPTAKE MORTALITY PETROLEUM POLLUTION.
AN B 59023070.

<243>

AU CLARK, D. P. POULTER, L. W. WILSON, O. W. CHRISTENSON, W. N.
IN THIOKOL CORP BRIGHAM CITY UTAH WASATCH DIV ENGINEERING CENTER,

TYNDALL AFB, FLA. 401261.
YR 75. 122P.
TI THE TREATMENT AND ANALYSIS OF CYANIDE WASTEWATER.
NT FINAL REPT. SEP 73-DEC 74.
PR PC$5.25/MF$2.25.
AB THE REPORT CONCERNS THE TREATMENT OF INDUSTRIAL WASTES CONTAINING CYANIDES, ESPECIALLY WASTES FROM ELECTROPLATING PROCESSES. THE PROTOTYPE SYSTEM TREATMENT CONCEPT IS ESSENTIALLY CHLORINATION VIA ELECTROLYTIC GENERATION OF CHLORINE IN THE WASTE WATER. DESIGN AND OPERATING ASPECTS ARE DISCUSSED. OTHER CYANIDE TREATMENT PROCESSES ARE REVIEWED AND ANALYTICAL TECHNIQUES ARE DISCUSSED.
MJ CYANIDES, CHLORINATION.
MN ELECTROPLATING, WATER-POLLUTION, PROTOTYPES, CHEMICAL-ANALYSIS, TEST-METHODS, WASTE-TREATMENT, ELECTROLYSIS, ELECTROCHEMISTRY, PILOT-PLANTS, PERFORMANCE-ENGINEERING.
ID INDUSTRIAL-WASTE-TREATMENT, WATER-POLLUTION-CONTROL, WATER-ANALYSIS, NTISDODAF.
AN N AD/A-006 394/1SL.

<244>
AU CLARK, E W. BAKER, C D. JESERNIG, W V. HUETHER, C H.
IN SHERWIN WILLIAMS CO. CHICAGO, IL 60628.
YR 73.
TI RECOVERING PARA-CRESOL FROM PROCESS EFFLUENT.
SO CHEMICAL ENGINEERING PROGRESS, 69(8): 77-78, AUG. 1973.
LG EN.
AB NONE.
ID CRESYLICS, SUMMARY ONLY, SHERWIN WILLIAMS CO., P-CRESOL, CHICAGO.
DE ACTIVATED CARBON, WASTE WATER TREATMENT, ILLINOIS, CHEMICAL RECOVERY, PAINT INDUSTRY WASTES, AIR POLLUTANTS.
AN P 7402909.

<245>
AU CLARK, ROBERT C. JR. FINLEY, JOHN S.
IN NORTHWEST FISH. CENT. NATL. OCEANIC ATMOS. ADM. SEATTLE. WASH.
YR 73.
TI PARAFFIN HYDROCARBON PATTERNS IN PETROLEUM-POLLUTED MUSSELS.
SO MAR. POLLUT. BULL. 4. P172-6. 1973.
LG EN.
DE PARAFFIN HYDROCARBON DETECTION MUSSEL. PETROLEUM WATER POLLUTION DETECTION. MYTILUS PETROLEUM PARAFFIN DETN.
AN C 08013067102.

<246>
AU CLARK, ROBERT C. JR. FINLEY, JOHN S.
IN NATIONAL MARINE FISHERIES SERVICE, SEATTLE, WASH. NORTHWEST FISHERIES CENTER.
YR 73. 13P.
TI TECHNIQUES FOR ANALYSIS OF PARAFFIN HYDROCARBONS AND FOR INTERPRETATION OF DATA TO ASSESS OIL SPILL EFFECTS IN AQUATIC ORGANISMS.
AV PUB. IN PROCEEDINGS OF THE JOINT CONFERENCE ON PREVENTION AND CONTROL OF OIL SPILLS, API/EPA/USCG, WASHINGTON, D.C. 13-15 MAR 73, P161-172.
PR REPRINT.
AB NORMAL PARAFFIN HYDROCARBONS ARE ONE OF THE MAJOR GROUPS OF COMPOUNDS IN CRUDE OIL AND PETROLEUM PRODUCTS. SINCE THESE COMPOUNDS CAN BE READILY SEPARATED FROM AQUATIC ORGANISMS USING SOLVENT EXTRACTION AND LIQUID-SOLID CHROMATOGRAPHY AND IDENTIFIED BY GAS-LIQUID CHROMATOGRAPHY, THE NORMAL PARAFFINS CAN SERVE AS INDICATORS OF PETROLEUM POLLUTION IN THE AQUATIC ENVIRONMENT. IT IS NECESSARY, HOWEVER, TO DIFFERENTIATE BETWEEN NATURAL (OR BIOGENIC) HYDROCARBONS AND THOSE ASSIMILATED BY THE ORGANISMS FROM POLLUTION SOURCES BY COMPARING THE NATURAL HYDROCARBON CONTENT AND PATTERN OF ORGANISMS FROM AREAS OF POLLUTION WITH THOSE OF ORGANISMS FROM RELATIVELY 'UNPOLLUTED' ARAS. THE PAPER SUGGESTS TECHNIQUES FOR OBTAINING AND ANALYZING PETROLEUM HYDROCARBON DATA WHICH CAN LEAD TO A STANDARD METHOD FOR DETECTING AND FOLLOWING THE BIOLOGICAL UPTAKE OF OIL BY LIVING ORGANISMS FROM THE AQUATIC ENVIRONMENT. (AUTHOR).
MJ WATER-POLLUTION, OILS, OILS, ABSORPTION-BIOLOGY, HYDROCARBONS, CHEMICAL-ANALYSIS.
MN ALKANES, IDENTIFYING, SOLVENT-EXTRACTION, BIOASSAY, INDICATOR-SPECIES, CHROMATOGRAPHIC-ANALYSIS, GAS-CHROMATOGRAPHY.
ID OIL-POLLUTION, PATH-OF- POLLUTANTS,

NOAA.
AN N COM-73-10998.

<247>

AU COBB, HOWELL D.
IN TRINITY UNIV SAN ANTONIO TEX DEPT OF BIOLOGY. 405286.
YR 73. 19P.
TI AN ECOLOGICAL APPROACH TO THE PROBLEM OF BIODEGRADATION OF PHENOLIC WASTES.
NT ANNUAL PROGRESS REPT. 1 JUN 72- 31 MAY 73.
AV 1.
PR PC$3.00/MF$1.45.
AB AN ATTEMPT WAS MADE TO ISOLATE AND IDENTIFY THOSE ORGANISMS ASSOCIATED WITH CRESOL METABOLISM IN THE INDUSTRIAL WASTE WATERS OF KELLY AIR FORCE BASE. RESULTS OF THIS WORK ARE PRESENTED IN ADDITION TO PRELIMINARY STUDIES ON THE METABOLISM OF CRESOL OXIDATION BY THESE ORGANISMS. (AUTHOR).
MJ INDUSTRIES, WASTES, PHENOLS, BIODETERIORATION.
MN METABOLISM, SAMPLING, PSEUDOMONAS, ESCHERICHIA, ENTEROBACTERIACEAE, WATER-POLLUTION.
ID CRESOLS, KELLY-AIR-FORCE-BASE, COMAMONAS, SERRATIA, AF.
AN N AD-770 750/8.

<248>

AU COFFMAN L M. WOODBRIDGE D D.
YR 74.
TI EFFECTS OF GAMMA RADIATION ON AQUEOUS SOLUTIONS OF PHENOL.
SO BULL ENVIRON CONTAM TOXICOL. 11. 5. P461-6. MAY 74.
LG EN.
MJ PHENOLS: RE.
MN COBALT-RADIOISOTOPES. (DOSERESPONSE-RELAT-RADIATION). INDUSTRIAL-WASTE.
AN M 75055443.

<249>

AU COLE J A. HALL E S. BLAIR A H. ROBINSON J L.
TI BIBLIOGRAPHY ON GROUND WATER POLLUTION.
SO COLE, JOHN A. (ED.). GROUNDWATER POLLUTION IN EUROPE. PROCEEDINGS OF A CONFERENCE. READING, ENGLAND, SEPT. 25-27, 1972. XI+547P. ILLUS. WATER INFORMATION CENTER, INC. PORT WASHINGTON, N.Y. U.S.A. ISBN 0-912394-12-9. 1974 (1975) 465-516.
DE MICROORGANISMS SYMPOSIA ADMINISTRATION FLOW AND DISPERSION ARTIFICIAL RECHARGE UNDERGROUND WASTE DISPOSAL SALT WATER SEWAGE HEAVY METALS CYANIDES HYDRO CARBONS PHENOLS DETERGENTS PESTICIDES AGRICULTURE PURIFICATION.
AN B 75062376.

<250>

AU COLIN, G. COONEY, J. D. WILES, D. M.
IN DIV. CHEM. NATL. RES. COUNC. CANADA. OTTAWA. ONT.
YR 76.
TI SOME FACTORS INFLUENCING THE MICROBIAL DEGRADATION OF POLYETHYLENE.
SO INT. BIODETERIOR. BULL. 12. P67- 71. 1976.
LG EN.
DE MICROBIAL DEGRDN KETONE. UV IRRADN POLYETHYLENE BIODEGRADABILITY.
AN C 08610055887.

<251>

AU COLLINS, R. P.
IN CONNECTICUT UNIV. STORRS. INST. OF WATER RESOURCES. RESEARCH AND TECHNOLOGY, WASHINGTON, D.C.
YR 76. 13P.
TI IDENTIFICATION OF STABLE ORGANIC COMPOUNDS IN WASTE EFFLUENTS.
NT COMPLETION REPT. APR 73-JUN 76.
PR PC$3.50/MF$3.00.
AB LABORATORY INVESTIGATIONS TO IDENTIFY THE REFRACTORY ORGANIC CHEMICALS RELEASED IN THE WASTEWATER OF LOCAL TEXTILE PLANTS AND TO DETERMINE THE FATE OF THESE COMPOUNDS AFTER THE WASTEWATER TREATMENT PROCESS WERE CARRIED OUT. EFFLUENTS AND SLUDGES FROM A PURIFAX WATER TREATMENT PLANT WERE ANALYZED BY GAS CHROMATOGRAPHY, INFRARED AND MASS SPECTROMETRY. CHEMICAL REAGENTS, INCLUDING ORTHO PHENYLPHENOL, PARA PHENYLPHENOL, BIPHENYL AND METHYL SALICYLATE, WHICH ARE UTILIZED BY THE TEXTILE INDUSTRIES USING THE PURIFAX FACILITY, WERE SUBJECTED TO CHLORINATION AND ANALYZED. OVER ONE HUNDRED COMPOUNDS WERE DETECTED BY GAS CHROMATOGRAPHY IN THE EFFLUENT AND SLUDGE OBTAINED FROM THE PURIFAX PLANT. MANY OF THE COMPOUNDS UTILIZED IN THE TEXTILE INDUSTRY

WERE READILY CHLORINATED AND COULD BE DETECTED IN BOTH THE EFFLUENT AND SLUDGE OBTAINED FROM THE TREATMENT PLANT.
MJ ORGANIC-COMPOUNDS, WATER-ANALYSIS.
MN WATER-POLLUTION, CHLORINATION, EFFLUENTS, INDUSTRIAL-WASTES, TEXTILE-INDUSTRY, GAS-CHROMATOGRAPHY, SLUDGE, INFRARED-SPECTROSCOPY, MASS-SPECTROSCOPY, PHENOLS.
ID REPRINTS, WATER-POLLUTION-DETECTION, SALICYLIC-ACID-METHYL-ESTER, BIPHENYLOLS, NTISDIOWRT.
AN N PB-256 562/0SL.

<252>
AU COLLINSWORTH, WILLIAM LEE.
IN UNIVERSITY OF MINNESOTA (0130) PH.D. 1971 179PP.
YR 71.
TI IDENTIFICATION AND METABOLISM OF CERTAIN INTERMEDIATES IN THE ENZYMIC DEGRADATION OF THE BENZENE NUCLEUS BY META FISSION OF CATECHOL.
SO DAI V32(06), SEC B, P3150.
DE BIOCHEMISTRY (0303).
AN D ADG72-00344.

<253>
IN COMMISSION OF THE EUROPEAN COMMUNITIES, LUXEMBOURG. DIRECTORATE FOR HEALTH PROTECTION. 1910896.
YR 75. 78P.
TI EUROPEAN COMMUNITY STUDY ON THE DETERMINATION OF CYANIDES, PHENOLS, AND HYDROCARBONS IN SURFACE WATER. REPORT OF A WORKING GROUP OF EXPERTS.
AV U.S. SALES ONLY. 1.
PR PC$5.00/MF$3.00.
AB WITH THE PARTICIPATION OF 34 LABORATORIES FROM 8 MEMBER STATES OF THE EUROPEAN COMMUNITY A PRELIMINARY COLLABORATIVE STUDY ON THE DETECTION OF CYANIDES, PHENOLS AND HYDROCARBONS IN SURFACE WATER WAS CONDUCTED. THE SAMPLES WERE RECEIVED BY NEARLY ALL PARTICIPANTS WITHIN 6 DAYS OF SHIPMENT, ONLY THE TRANSPORT TO 7 PARTICIPANTS TAKING A LONGER TIME. WITH A FEW EXCEPTIONS THE VARIATION IN TEMPERATURE DURING TRANSPORT WAS RELATIVELY SMALL. EACH PARTICIPATING LABORATORY CHOSE THE METHOD OF ANALYZING THE SAMPLES. AN APPRAISAL OF THE PARTICULAR METHODS COULD NOT BE DONE. IN DETAIL THE EVALUATION SHOWED THAT THE DETERMINATION OF HYDROCARBONS AND CYANIDES IN SURFACE WATER MAY LEAD TO CONSIDERABLY DIFFERENT RESULTS. IN HIGHER CONCENTRATION RANGES (>L MG CN EXP - /L) THE RESULTS OF THE MEASUREMENTS OF CYANIDE CONTENT WERE IN BETTER AGREEMENT. IN THE CONCENTRATION RANGE GIVEN IN THIS STUDY THE DETERMINATIONS OF PHENOL SHOWED THE SMALLEST VARIATION OF ALL PARAMETERS STUDIED. IN GENERAL THE RESULTS OF THE MULTIPLE DETERMINATIONS OF ALL PARAMETERS BY THE INDIVIDUAL LABORATORIES AGREED FAIRLY WELL. (ERA CITATION 01: 011476).
MJ CYANIDES, HYDROCARBONS, PHENOL, WATER-POLLUTION.
MN CHEMICAL-ANALYSIS, POLLUTION, SURFACE-WATERS.
ID ERDA-520200, WATER-ANALYSIS, NTISERDAE.
AN N EUR-5377E.

<254>
AU CONDREN, ARTHUR J.
IN PURDUE UNIV. LAFAYETTE. INDIANA.
YR 69.
TI RADIATION INDUCED OXIDATION OF SELECTED ORGANICS IN WASTE WATER.
PG 70 PP.
LG EN.
AV 70-3874.
DE IRRADN OXIDN ORG WASTE WATERS. OXIDN IRRADN ORG WASTE WATERS. PHENOLS IRRADN OXIDN WASTE WATER.
AN C 07322112699.

<255>
AU CONETTA, A. JANSEN, J. SALPETER, J.
IN TECHNICON INDUSTRIAL SYSTEMS, 511 BENEDICT AVE. TARRYTOWN, NY 10591.
YR 75.
TI AUTOMATED ANALYSIS FOR CYANIDE.
SO POLLUTION ENGINEERING, 7(1): 36- 37, JAN. 1975.
LG EN.
AB NONE.
ID UV DIGESTION.
DE AQUATIC ENVIRONMENTS, CYANIDES, DIGESTION, POLLUTANT ANALYSIS, WATER POLLUTION MEASUREMENTS.
AN P 7502266.

<256>
AU CONNORS K A. LIPARI J M.
IN SCHOOL OF PHARMACY, UNIVERSITY OF

WISCONSIN, MADISON, WI 53706.
YR 76.
TI EFFECT OF CYCLOAMYLOSES ON APPARENT DISSOCIATION CONSTANTS OF CARBOXYLIC ACIDS AND PHENOLS: EQUILIBRIUM ANALYTICAL SELECTIVITY INDUCED BY COMPLEX FORMATION.
SO J PHARM SCI. 65. 3. P379-83. MAR 76.
LG EN.
MJ AMYLOSE: AA.
MN CHEMISTRY-PHARMACEUTICAL. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 76171367. 7608.

<257>
AU COOK, L E. SPANGELO, R C.
IN UNIV. OF NORTH DAKOTA, DEPT. OF CHEMISTRY, GRAND FORKS, 58201.
YR 74.
TI SEPARATION OF MONOSUBSTITUTED PHENOL ISOMERS USING LIQUID CRYSTALS.
SO ANALYTICAL CHEMISTRY, 46(1): 122-128, JAN. 1974.
LG EN.
AB NONE.
ID PHENOL ISOMER SEPARATION.
DE AROMATIC COMPOUNDS, CHEMICAL ANALYSIS, GAS CHROMATOGRAPHY, INDUSTRIAL WASTES, PESTICIDE DECOMPOSITION, SEPARATION PROCESSES.
AN P 7500994.

<258>
AU COOPER R L. CATCHPOLE J R.
YR 73.
TI THE BIOLOGICAL TREATMENT OF CARBONIZATION EFFLUENTS PART 4 THE NITRIFICATION OF COKE OVEN LIQUORS AND OTHER TRADE WASTES AND THE ENHANCEMENT OF BIOLOGICAL OXIDATION OF RESISTANT ORGANIC COMPOUNDS BY THE ADDITION OF GROWTH FACTORS TO ACTIVATED SLUDGE.
SO WATER RES. 7 (8). 1137-1153.
DE BACTERIAL SLUDGE P AMINO BENZOIC-ACID GLUCOSE PYRIDINE OXIDATION THIO CYANATE CYANIDE AMMONIA OXIDATION LIMED LIQUOR ACIDIFICATION.
AN B 59034312.

<259>
AU COOPER, R. L. WHEATSTONE, K. C.
IN BR. COKE RES. ASSOC. CHESTERFIELD. ENGL.
YR 73.
TI DETERMINATION OF PHENOLS IN AQUEOUS EFFLUENTS.
SO WATER RES. 7. P1375-84. 1973.
LG EN.
DE PHENOL DETN WASTE WATER. WASTE WATER ANALYSIS PHENOL.
AN C 08004019160.

<260>
AU COSTA LOPEZ, J. RIVERA RECIO, P.
IN FAC. CIENC. UNIV. BARCELONA. BARCELONA. SPAIN.
YR 77.
TI CATALYTIC OXIDATION OF CYCLOHEXANE IN A FIXED BED. COMPARISON WITH THE RESULTS IN A FLUIDIZED BED.
SO AN. QUIM. 73. P445-53. 1977.
LG SP.
DE KINETICS OXIDN CYCLOHEXANE. CATALYST OXIDN CYCLOHEXANE. AROMATIZATION CYCLOHEXANE.
AN C 08717133525.

<261>
AU COSTA LOPEZ, J. RIVERA RECIO, P.
IN FAC. CIENC. UNIV. BARCELONA. BARCELONA. SPAIN.
YR 74.
TI OBTAINMENT OF KINETIC DATA IN FLUIDIZED BEDS. OXIDATION OF CYCLOHEXANE TO MALEIC ANHYDRIDE.
SO AN. QUIM. 70. P836-43. 1974.
LG SP.
DE MASS TRANSFER OXIDN CYCLOHEXANE. FLUIDIZED BED OXIDN CYCLOHEXANE. REACTOR KINETICS OXIDN CYCLOHEXANE. VANADIUM PENTOXIDE OXIDN CYCLOHEXANE. MALEIC ANHYDRIDE CYCLOHEXANE OXIDN.
AN C 08221139226.

<262>
AU COTTET J.
YR 75.
TI THE PHYSICOCHEMICAL CHARACTERISTICS OF THE POTABILITY OF WATER.
SO BULL ACAD NATL MED (PARIS). 159 (5). (RECD 1976) 383-389.
DE FRANCE WHO POLLUTION STANDARDS CHLORIDES PESTICIDES CARCINOGENS ARSENIC VINYL CHLORIDE MONOMER.
AN B 76053887.

<263>
AU COUGHLIN, ROBERT W.
IN DEP. CHEM. ENG. LEHIGH UNIV. BETHLEHEM, PA.
YR 70.
TI EFFECT OF SURFACE GROUPS ON

ADSORPTION OF POLLUTANTS.
PG 29 PP.
LG EN.
DE CARBON SORPTION WATER POLLUTANT. SODIUM BENZENESULFONATE SORPTION CARBON. NITROBENZENE SORPTION CARBON. DEXTROSE SORPTION CARBON. PHENOL SORPTION CARBON. UREA SORPTION CARBON.
AN C 07614076952.

<264>

AU COWEN, WILLIAM F. COOPER, W. J. HIGHFILL, J. W.
IN U. S. ARMY MED. BIOENG. RES. DEV. LAB. FORT DETRICK. FREDERICK. MD.
YR 75.
TI EVACUATED GAS SAMPLING VALVE FOR QUANTITATIVE HEAD SPACE ANALYSIS OF VOLATILE ORGANIC COMPOUNDS IN WATER BY GAS CHROMATOGRAPHY.
SO ANAL. CHEM. 47. P2483-4. 1975.
LG EN.
DE GAS SAMPLING VALVE CHROMATOG. SAMPLING VALVE CHROMATOG ORG COMPD. HEAD SPACE ANALYSIS SAMPLING VALVE. ACETONE AQ GAS CHROMATOG. CHLOROFORM AQ GAS CHROMATOG. ETHANOL AQ GAS CHROMATOG. PROPANOL AQ GAS CHROMATOG. VOLATILE ORG GAS CHROMATOG.
AN C 08324201621.

<265>

AU COYNE, ROBERT V. CAMPBELL, JAMES M. ROBLES, EDWARD G. JR.
IN ENVIRONMENTAL HEALTH LAB MCCLELLAN AFB CALIF. 407609.
YR 72. 57P.
TI WATER SAMPLING GUIDELINES AND INTERPRETATION OF DATA.
NT FINAL REPT.
PR PC$3.00/MF$0.95.
AB THE REPORT DISCUSSES A VARIETY OF FACETS PERTAINING TO WATER SAMPLING PROGRAMS, PRESERVATION, MANIPULATION AND TRANSMISSION OF SAMPLES, AND THE INTERPRETATION OF THE ANALYTICAL DATA. A BRIEF REVIEW OF EACH OF THE MAJOR POLLUTANTS IS INCLUDED.
MJ WATER-POLLUTION, CHEMICAL- ANALYSIS.
MN SAMPLING, PH, ARSENIC, METALS, PESTICIDES, HALOGENATED-HYDROCARBONS, COLORS, CYANIDES, PARTICLES, HALIDES, SURFACE-ACTIVE-SUBSTANCES, SULFONATES, NITROGEN, OILS, PHENOLS, PHOSPHORUS, STANDARDS.
ID WATER-ANALYSIS, WATER-POLLUTION-DETECTION, CHEMICAL-OXYGEN-DEMAND.
AN N AD-752 537.

<266>

AU CREWS, RICHARD C.
IN AIR FORCE ARMAMENT LAB EGLIN AFB FLA. 400936.
YR 74. 13P.
TI EFFECTS OF PROPYLENE OXIDE ON SELECTED SPECIES OF FISHES.
NT FINAL REPT. MAY-SEP 74.
PR PC$3.25/MF$2.25.
AB IN CONJUNCTION WITH THE FUEL AIR EXPLOSIVES TESTING AND EVALUATION PROGRAM, LABORATORY INVESTIGATIONS INTO THE EFFECTS OF PROPYLENE OXIDE WERE ACCOMPLISHED USING TWO SELECTED SPECIES OF FRESHWATER FISHES AND ONE MARINE SPECIES. FOR A 96-HOUR EXPOSURE PERIOD, THE MEDIAN TOLERANCE LIMITS (TLM) FOR PROPYLENE OXIDE WERE DETERMINED TO BE 141 PPM FOR MOSQUITOFISH (GAMBUSIA AFFINIS BAIRD AND GERARD), 215 PPM FOR BLUEGILL (LEPOMIS MACROCHIRUS RAFINESQUE), AND 89 PPM FOR COMMON MULLET (MUGIL CEPHALUS LINNAEUS). THE RESULTS OF THESE TESTS DEMONSTRATE THAT THE TOXICITY OF PROPYLENE OXIDE IS SUFFICIENTLY HIGH TO WARRANT CAUTION WITH ITS HANDLING NEAR FRESH-WATER OR MARINE AQUATIC SYSTEMS.
MJ FUEL-AIR-EXPLOSIVES, AQUATIC-ORGANISMS, FISHES.
MN TOXICOLOGY, TOLERANCES-PHYSIOLOGY.
ID PROPYLENE-OXIDE, MARINE-FISHES, FRESH-WATER-FISHES, WATER-POLLUTION-EFFECTS-ANIMALS, NTISDODAF.
AN N AD/A-003 637/6SL.

<267>

AU CROIX, J. M. LABROCHE, C. LACKME, C. MERLE, A.
IN ENGL.
YR 74.
TI DENSE BED IN A SPRAY COLUMN. APPLICATION TO THE EXTRACTION OF PHENOL FROM WASTE WATER.
SO PROC. INT. SOLVENT EXTR. CONF. 1. P913-26. 1974.
LG EN.
AV JEFFREYS, G. V.
DE PHENOL WASTEWATER. COUNTERCURRENT EXTN PHENOL. SPRAY COLUMN EXTN PHENOL. WASTEWATER PHENOL EXTN.
AN C 08416111198.

<268>

AU CROIX, J. M. LABROCHE, C. LACKME, C. MERLEE, A.
IN DEP. TRANSFERT CONVERS. ENERG. C.E.N. GRENOBLE. GRENOBLE. FR.
YR 73.
TI APPLICATION OF DENSE-BED COLUMNS. TREATMENT OF SEWAGES CONTAINING PHENOLS BY LIQUID-LIQUID EXTRACTION.
SO BULL. INFORM. SCI. TECH. COMMIS. ENERG. AT. (FR.). NO. 177. P11-24. 1973.
LG FR.
DE PHENOL REMOVAL WASTE WATER.
AN C 07910057365.

<269>

AU CROW S A. BOWMAN P I. AHEARN D G.
YR 77.
TI EFFECT OF CHLORINATED AND AROMATIC HYDRO CARBONS ON HEXA DECANE METABOLISM BY SURFACE SLICK MICROORGANISMS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 77. 244.
DE ABSTRACT CANDIDA-LIPOLYTICA ESTUARY.
AN B 77049608.

<270>

AU CSANADY, MIHALY.
IN ORSZ. KOZEGESZSEGUGYI INT. BUDAPEST. HUNG.
YR 74.
TI GROUNDWATER POLLUTION CAUSED BY EFFLUENT FROM PLATING WORKS.
SO HIDROL. KOZL. 54. P62-4. 1974.
LG HU.
DE CHROMIUM WASTEWATER PLATING HAZARD. GROUNDWATER POLLUTION PLATING WASTEWATER. CYANIDE POLLUTION PLATING WASTEWATER.
AN C 08506036857.

<271>

AU CUKOR, PETER. MADLIN, HOWARD.
IN BAYSIDE RES. CENT. GTE LAB. INC. BAYSIDE. N. Y.
YR 73.
TI GAS CHROMATOGRAPHIC ANALYSIS OF WATER AND WASTE WATERS.
SO WATER WATER POLLUT. HANDB. 4. P1557-615. 1973.
LG EN.
AV CIACCIO, LEONARD L.
DE REVIEW GAS CHROMATOG WATER ANALYSIS. ACID ORG DETN WATER. PHENOL DETN WATER.
AN C 07824151112.

<272>

AU CUMMINS, J. J. DOOLITTLE, F. G. ROBINSON, W. E.
IN BUREAU OF MINES, WASHINGTON, D.C. LARAMIE ENERGY RESEARCH CENTER, WYO. 068 450.
YR 74. 23P.
TI THERMAL DEGRADATION OF GREEN RIVER KEROGEN AT 150 TO 350C. COMPOSITION OF PRODUCTS.
NT REPT. OF INVESTIGATIONS. PREPARED BY LARAMIE ENERGY RESEARCH CENTER, WYO. SEE ALSO PB-209 011.
PR PC$3.00/MF$2.25.
AB GREEN RIVER OIL SHALE PREVIOUSLY EXTRACTED BY BENZENE WAS HEATED AT 150C FOR 0.5 TO 360 DAYS TO PROVIDE INFORMATION ON IN SITU PROCESSING CONDITIONS, TO DETERMINE THE EFFECT OF LOW-TEMPERATURE HEATING ON THE UNCONVERTED KEROGEN, AND TO DETERMINE THE COMPOSITION OF BENZENE- SOLUBLE THERMAL PRODUCTS. THE METHODS USED IN DETERMINING THE COMPOSITION OF THE SOLUBLE THERMAL PRODUCTS CONSISTED OF FRACTIONATION OF THE SOLUBLE MATERIAL, ELEMENTAL ANALYSIS OF THE SOLUBLE PRODUCTS, FRACTIONATION OF THE POLAR RESINS BY ION-EXCHANGE CHROMATOGRAPHY, GAS CHROMATOGRAPHIC ANALYSIS OF N-ALKANES, AND MASS SPECTRAL ANALYSIS OF THE BRANCHED PLUS CYCLIC ALKANES AND AROMATIC OILS. THE METHODS USED TO DETERMINE THE EFFECT OF LOW-TEMPERATURE HEATING ON THE UNCONVERTED KEROGEN REMAINING IN THE OIL-SHALE HEATED RESIDUES CONSISTED OF CARBON-HYDROGEN ANALYSIS, VOLATILE MATERIAL DETERMINATION, CARBON RESIDUE DETERMINATION AND OXIDATION RATE DETERMINATION. (MODIFIED AUTHOR ABSTRACT).
MJ OIL-SHALE, PYROLYSIS.
MN CHROMATOGRAPHIC-ANALYSIS, CHEMICAL-COMPOSITION, IN-SITU-COMBUSTION, MATERIALS-SEPARATION, ALKANES, AROMATIC-COMPOUNDS, SHALE-OIL, ION-EXCHANGING, MASS-SPECTRA, GAS-CHROMATOGRAPHY, SOLVENT-EXTRACTION, TEMPERATURE.
ID KEROGEN, NTISDIBM.
AN N PB-234 684/9.

<273>

AU CUMMINS, J. J. ROBINSON, W. E.
IN BUREAU OF MINES, WASHINGTON, D.C. 068 450.
YR 72. 20P.
TI THERMAL DEGRADATION OF GREEN RIVER

KEROGEN AT 150 TO 350 C.
NT REPT. OF INVESTIGATIONS.
PR PC$3.00/MF$0.95.
AB GREEN RIVER OIL SHALE PREVIOUSLY EXTRACTED BY BENZENE WAS HEATED AT 150, 200, 250, 300, AND 350C FOR 0.5 TO 360 DAYS TO DETERMINE THE RATE AT WHICH KEROGEN DEGRADES TO THERMAL PRODUCTS, THE TYPES OF THERMAL PRODUCTS FORMED, AND THE EFFECT PROLONGED LOW-TEMPERATURE HEATING (PREHEATING) HAS UPON SUBSEQUENT ASSAY YIELDS. THERMAL DECOMPOSITION OF KEROGEN AT 150 TO 350C IS TREATED AS A FIRST-ORDER REACTION. VARIATIONS IN THE RATE OF FORMATION OF INDIVIDUAL TYPE COMPONENTS OF THE PYROLYTIC PRODUCTS WERE FOUND. CARBON BALANCES SHOW AN INCREASE IN THE AMOUNT OF KEROGEN CONVERTED TO BITUMEN AND OIL (FROM ASSAY OF PREHEATED OIL SHALE) AS THE TEMPERATURE OF PREHEATING INCREASED FROM 150 TO 350C. (AUTHOR).
MJ OIL-SHALE, PYROLYSIS.
MN SHALE-OIL, SOLVENT-EXTRACTION, REACTION-KINETICS, DECOMPOSITION-REACTIONS, RETORTS-REACTORS.
ID KEROGEN.
AN N PB-209 011.

<274>
AU CUMMINS, J. J. ROBINSON, WILBUR EUGENE.
IN LARAMIE PET. RES. CENT. BUR. MINES. LARAMIE. WYO.
YR 68.
TI CONTROLLED LOW-TEMPERATURE PYROLYSIS OF BENZENE-EXTRACTED GREEN RIVER OIL SHALE.
SO AMER. CHEM. SOC. DIV. FUEL CHEM. PREPR. 12. P41-50. 1968.
LG EN.
DE OIL SHALES PYROLYSIS. SHALES OIL PYROLYSIS. PYROLYSIS OIL SHALES. KEROGENS SHALES PYROLYSIS. KINETICS SHALES PYROLYSIS.
AN C 07324122104.

<275>
AU CUNDELL A M. TRAXLER R W.
YR 76.
TI PSYCHROPHILIC HYDRO CARBON DEGRADING BACTERIA FROM NARRAGANSETT BAY RHODE-ISLAND USA.
SO MATER ORG (BERL). 11 (1). 1-17.
DE ENRICHMENT CULTURE FUEL OILS KEROSINE N HEXA DECANE METHYL CYCLO HEXANE P XYLENE N HEXYL BENZENE NAPHTHALENE TEMPERATURE GENERATION TIME.
AN B 63000169.

<276>
AU CZAPLICKI, EDWARD J. BOLLAG, JEAN-MARC.
IN LAB. IZOT. INST. OCHR. ROSLIN. POZNAN. POL.
YR 75.
TI MICROBIAL DEGRADATION OF 1-NAPHTHOL.
SO BIUL. INST. OCHR. ROSL. 59. P241- 8. 1975.
LG PO.
DE NAPHTHOL DEGRDN BACTERIA FUNGI.
AN C 08519138221.

<277>
AU DAGLEY S.
IN DEPARTMENT OF BIOCHEMISTRY, UNIVERSITY OF MINNESOTA, ST. PAUL, MN.
YR 76.
TI MICROBIAL CATABOLISM AND THE CARBON CYCLE.
SO BIOCHEM SOC TRANS. 4. 3. P455-8. 1976.
LG EN.
MJ BACTERIA: ME.
MN OXYGENASES: ME. UNITED-STATES-GOVERNMENT-SUPPORTED-NIH: (NIH-SUP).
AN M 77069367. 7704.

<278>
AU DAGLEY S.
YR 71.
TI CATABOLISM OF AROMATIC COMPOUNDS BY MICRO-ORGANISMS.
SO ADV MICROB PHYSIOL. 6. 0. P1-46. 1971.
LG EN.
MJ HYDROCARBONS: ME.
MN REVIEW. TRYPTOPHAN-OXYGENASE: ME. BENZENE-DERIVATIVES: ME. CATECHOLS: ME. ME. MORAXELLA: ME, EN.
AN M 74261912.

<279>
AU DANCH, ALOJZY. CHMIELOWSKI, JERZY.
IN UNIV. SLASKI. KATOWICE. POL.
YR 74.
TI USE OF THIN-LAYER CHROMATOGRAPHY FOR THE IDENTIFICATION OF PHENOLS IN WATERS FROM THERMAL PROCESSING OF COAL.
SO CHEM. ANAL. (WARSAW). 19. P367- 73.

1974.
LG PO.
DE PHENOL DETN COAL WASTEWATER CHROMATOG. COAL WASTEWATER ANALYSIS PHENOL CHROMATOG. WASTEWATER COAL ANALYSIS PHENOL CHROMATOG.
AN C 08112068141.

<280>
AU DAVEY J F. GIBSON D T.
YR 74.
TI BACTERIAL METABOLISM OF P XYLENE AND M XYLENE OXIDATION OF A METHYL SUBSTITUENT.
SO J BACTERIOL. 119 (3). 923-929.
DE PSEUDOMONAS-SP ISOMERS N METHYL-N-NITRO-N-NITROSO GUANIDINE MUTAGEN PATHWAY GROWTH.
AN B 58068575.

<281>
AU DAVEY J F. RIBBONS D W.
IN DEPARTMENT OF BIOCHEMISTRY, UNIVERSITY OF MIAMI SCHOOL OF MEDICINE, MIAMI, FLORIDA 33152.
YR 75.
TI METABOLISM OF RESORCINYLIC COMPOUNDS BY BACTERIA. PURIFICATION AND PROPERTIES OF ACETYLPYRUVATE HYDROLASE FROM PSEUDOMONAS PUTIDA 01.
SO J BIOL CHEM. 250. 10. P3826-30. 25 MAY 75.
LG EN.
MJ HYDROLASES: ME.
MN ACETIC-ACIDS. ENZYME-ACTIVATION: DE. HYDROGEN-ION-CONCENTRATION. PD. SPECTROPHOTOMETRY-ULTRAVIOLET. UNITED-STATES-GOVERNMENT-SUPPORTED-NIH: (NIH-SUP).
AN M 75151538.

<282>
AU DAVID K A V. FAY P.
IN DEP. BOT. BIOCHEM. WESTFIELD COLL. UNIV. LOND. LONDON NW3 7ST, ENGL. UK.
YR 77.
TI EFFECTS OF LONG-TERM TREATMENT WITH ACETYLENE ON NITROGEN FIXING MICROORGANISMS.
SO APPL ENVIRON MICROBIOL. 34 (6). (RECD 1978) 640-646.
LG EN.
DE ANABAENA-CYLINDRICA ANABAENOPSIS-CIRCULARIS RHODOSPIRILLUM-RUBRUM AZOTOBACTER-VINELANDII ENZYME ACTIVITY PHOTOSYNTHESIS.
AN B 65042769.

<283>
AU DAVIDOVA, E. G. KRETOVA, L. G. RACHINSKII, V. V.
IN MOSK. S-KH. AKAD. MOSCOW. USSR.
YR 77.
TI METABOLIC POOLS OF CARBON FROM YEASTS DURING THEIR GROWTH ON N-OCTADECANE.
SO IZV. TIMIRYAZEVSK. S-KH. AKAD. P14-17. 1977.
LG RS.
DE CANDIDA CARBON METAB OCTADECANE.
AN C 08713098612.

<284>
AU DAVIS A R. HARDIN A H.
YR 76.
TI RAMAN SPECTRAL STUDIES OF ORGANIC MOLECULES ADSORBED AT MODEL SEDIMENT SURFACES.
SO CAN J SPECTROSC. 21 (5). 139-143.
DE POLLUTION PYRIDINE GLYCINE LYSINE BETA ALANINE METAL OXIDES CLAY SCATTERING AIR WATER SOLID SPECTROSCOPY.
AN B 77021438.

<285>
AU DAWSON, G. W. SHUCKROW, A. J. SWIFT, W. H.
IN BATTELLE MEMORIAL INST. RICHLAND, WASH. PACIFIC NORTHWEST LABS. 387 060.
YR 70. 409P*.
TI CONTROL OF SPILLAGE OF HAZARDOUS POLLUTING SUBSTANCES.
NT WATER POLLUTION CONTROL RESEARCH SERIES. PAPER COPY AVAILABLE FROM SUPERINTENDENT OF DOCUMENTS, GPO, WASHINGTON, D.C. 20402. $3.00 AS I67.13/4-15090FQZ10/70.
PR SOD MF$0.95.
AB AN EVALUATION OF THE WATER QUALITY ASPECTS GERMANE TO THE SPILLAGE OF HAZARDOUS POLLUTING SUBSTANCES IS DEVELOPED. EMPHASIS IS PLACED ON DEFINITION AND CLASSIFICATION OF CHEMICAL MATERIALS; THE NATURE OF THE SOURCES OF SPILLAGE AND PAST EXPERIENCE; AND ANALYSIS OF THE RELATIVE THREAT TO WATER QUALITY OFFERED BY SUCH SUBSTANCES; A REVIEW OF PRESENTLY AVAILABLE DETECTION, CONTROL, AND REMOVAL TECHNOLOGY; RELATIONSHIP TO WATER QUALITY STANDARDS; AND THE RELEVANT

ADMINISTRATIVE, ENFORCEMENT, AND COST RECOVERY ASPECTS. OVER 800 CHEMICAL SUBSTANCES WERE EVALUATED AS TO THEIR ANNUAL PRODUCTION AND TRANSPORT QUANTITIES, THEIR CRITICAL CONCENTRATION IN THE AQUATIC ENVIRONMENT RESULTING IN WATER QUALITY IMPAIRMENT FOR THE SEVERAL BENEFICIAL WATER USES, DETECTION LIMITS (BOTH FIELD AND LABORATORY), AND THE CONTROL AND REMOVAL METHODS PRESENTLY AVAILABLE OR POTENTIALLY PRACTICABLE. OVER 250 CHEMICALS AND COMPOUNDS, GENERALLY THOSE IN LARGE SCALE PRODUCTION AND UTILIZATION, ARE PRIORITY RANKED IN ORDER OF RELATIVE THREAT TO WATER QUALITY IN TERMS OF ANNUAL PRODUCTION/SALES, INTRINSIC HAZARD TO WATER QUALITY, TRANSPORT MODE, AND PAST STATISTICAL ACCIDENT FREQUENCY. RECOMMENDATIONS ARE PRESENTED REGARDING FUTURE RESEARCH AND DEVELOPMENT EFFORTS AIMED AT MITIGATING DAMAGE AND A CONSENSUS OF INFORMED PARTIES IS PRESENTED RELATING TO THE NEED FOR ADDITIONAL LEGISLATION. (AUTHOR).

MJ HAZARDOUS-MATERIALS, WATER-POLLUTION, REVIEWS, HAZARDOUS-MATERIALS, HIGHWAY-TRANSPORTATION, WATER-POLLUTION, WATER-TRANSPORTATION, WATER-POLLUTION, RAIL-TRANSPORTATION, WATER-POLLUTION.

MN CLASSIFICATIONS, TOXICITY, WATER-QUALITY, GOVERNMENT-POLICIES, DETECTION, NATIONAL-GOVERNMENT, ACCIDENTS, FISH, RECOMMENDATIONS, MONITORS, TABELS-DATA.

ID WATER-POLLUTION-DETECTION, WATER-POLLUTION-EFFECTS-PLANTS, WATER-POLLUTION-EFFECTS-ANIMALS, LAW-JURISPRUDENCE, PESTICIDES, FERTILIZERS, CHEMICAL-INDUSTRY, PHENOLS.

AN N PB-197 596.

<286>

AU DAY, DAVID CHARLES.

IN UNIVERSITY OF WATERLOO (CANADA) (1141) PH.D. 1972, 001PP.

YR 72.

TI AQUEOUS PHASE OXIDATION OF PROPIONIC ACID.

SO DAI V34(01), SEC B, P0195.

DE ENGINEERING, CHEMICAL (0542).

AN D ADG02-77499.

<287>

AU DE BONT J A M.

YR 76.

TI BACTERIAL DEGRADATION OF ETHYLENE AND THE ACETYLENE REDUCTION TEST.

SO CAN J MICROBIOL. 22 (7). 1060- 1062.

DE PURE CULTURES SOIL CO OXIDATION.

AN B 62056950.

<288>

AU DE BONT J A.

YR 75.

TI OXIDATION OF ETHYLENE BY BACTERIA.

SO ANN APPL BIOL. 81. 1. P119-21. SEP 75.

LG EN.

MJ ETHYLENES: ME. (ETHYLENE).

MN OXIDATION-REDUCTION.

AN M 76038111.

<289>

AU DE BONT J A. ALBERS R A.

IN LABORATORY OF MICROBIOLOGY, AGRICULTURAL UNIVERSITY, WAGENINGEN, THE NETHERLANDS.

YR 76.

TI MICROBIAL METABOLISM OF ETHYLENE.

SO ANTONIE VAN LEEUWENHOEK. 42. 1- 2. P73-80. 1976.

LG EN.

MJ BACTERIA: ME.

MN ACETYL-COENZYME-A-SYNTHETASE: ME, (ACETYL-COA-SYNTHETASE). ALDEHYDE-OXIDOREDUCTASES: ME. ME.

AN M 76251506. 7611.

<290>

AU DE BONT, J. A. M.

IN LAB. MICROBIOL. AGRIC. UNIV. WAGENINGEN. NETH.

YR 76.

TI OXIDATION OF ETHYLENE BY SOIL

SO ANTONIE VAN LEEUWENHOEK. 42. P59-71. 1976.

LG EN.

DE ETHYLENE OXIDN SOIL BACTERIA.

AN C 08505030335.

<291>

AU DE KLERK, H. VAN DER LINDEN, A. C.

IN K. SHELL-LAB. AMSTERDAM. NETH.

YR 74.

TI BACTERIAL DEGRADATION OF CYCLOHEXANE. PARTICIPATION OF COOXIDATION REACTION.

SO ANTONIE VAN LEEUWENHOEK; J. MICROBIOL. SEROL. 40. P7-15. 1974.

LG EN.
DE CYCLOHEXANE BIODEGRDN PSEUDOMONAS. HYDROCARBON OXIDN BIODEGRDN PSEUDOMONAS.
AN C 08101002386.

<292>

AU DE=GODOY, M. P.
IN E.E.B.P. PIRASSUNUNGA. BRAZIL.
YR 69.
TI RIVER WATERS, POLLUTION, AND POTABLE WATERS.
SO REV. BRASIL. PESQUI. MED. BIOL. 2. P95-9. 1969.
LG PT.
DE METHYL MERCAPTAN RIVERS POLLUTION. PULP PLANT RIVERS POLLUTION. BLACK LIQUOR RIVERS POLLUTION. RIVERS POLLUTION PULP PLANT. POTABLE WATER POLLUTED RIVERS.
AN C 07214070411.

<293>

AU DEAN-RAYMOND, D. BARTHA, R.
IN RUTGERS - THE STATE UNIV NEW BRUNSWICK N J RESEARCH, ARLINGTON, VA. 312250.
YR 75. 21P.
TI BIODEGRADATION OF SOME POLYNUCLEAR AROMATIC PETROLEUM COMPONENTS BY MARINE BACTERIA.
NT TECHNICAL REPT. 1 JAN-31 DEC 74.
PR PC$3.25/MF$2.25.
AB THE METABOLISM OF POLYNUCLEAR AROMATIC HYDROCARBONS WAS STUDIED USING GAS CHROMATOGRAPHIC, THIN-LAYER CHROMATOGRAPHIC, INFRARED AND MASS SPECTROMETRIC TECHNIQUES. OF SIX BACTERIAL STRAINS ISOLATED FROM OIL POLLUTED ESTUARINE WATER, ALL GREW ON NAPHTHALENE, 2-METHYLNAPHTHALENE AND 2-ETHYLNAPHTHALENE AS SOLE SOURCES OF CARBON AND ENERGY. SEVERAL OTHER ALKYL NAPHTHALENES WERE METABOLIZED BY VARIOUS STRAINS. PHENANTHRENE AND ANTHRACENE WERE METABOLIZED BY THREE OUT OF SIX ORGANISMS. ONLY ONE NAPHTHALENE-GROWN STRAIN WAS ABLE TO METABOLIZE OTHER POLYAROMATIC COMPOUNDS, INCLUDING ACENAPHTHYLENE, BIPHENYL, FLUORENE AND TETRALIN. THE SPECIFICITY OF SALICYLATE HYDROXYLASE GOVERNS THE UTILIZATION OF SEVERAL NAPHTHALENE DERIVATIVES WHILE INABILITY TO OXIDIZE NAPHTHOIC ACIDS PREVENTS GROWTH ON DIMETHYLNAPHTHALENES.
MJ AROMATIC-POLYCYCLIC- HYDROCARBONS, BIODETERIORATION, METABOLISM, BACTERIA.
MN NAPHTHALENES, SALICYLIC-ACIDS, OILS.
ID OIL-POLLUTION-REMOVAL, WATER-POLLUTION-EFFECTS-ANIMALS, NTISDODN.
AN N AD/A-006 346/1SL.

<294>

AU DEDONDER, A. VAN SUMERE, C. F.
IN LAB. PLANTENBIOCHEM. UNIV. GHENT. GHENT. BELG.
YR 71.
TI EFFECT OF PHENOLICS AND RELATED COMPOUNDS ON THE GROWTH AND THE RESPIRATION OF CHLORELLA VULGARIS.
SO Z. PFLANZENPHYSIOL. 65. P70-80. 1971.
LG EN.
DE PHENOLICS ALGAE GROWTH. RESPIRATION ALGAE PHENOLICS. MENADIONE GROWTH ALGAE. QUINONE RESPIRATION ALGAE.
AN C 07517108824.

<295>

AU DEESON, A. F. L.
IN ENGL.
YR 70.
TI WATER POLLUTION AND THE CHEMICAL INDUSTRY.
SO BRIT. CHEM. ENG. 15. P1141-6. 1970.
LG EN.
DE STDS WATER QUALITY. WATER QUALITY STDS. ACIDITY WATER QUALITY. TEMP WATER QUALITY. BOD WATER QUALITY. CYANIDES WATER QUALITY. GREASES WATER QUALITY. OILS WATER QUALITY. PHENOL WATER QUALITY. METALS WATER QUALITY.
AN C 07404015592.

<296>

AU DEINZER M. MELTON R. MITCHELL D.
YR 75.
TI TRACE ORGANIC CONTAMINANTS IN DRINKING WATER THEIR CONCENTRATION BY REVERSE OSMOSIS.
SO WATER RES. 9 (9). 799-805.
DE HUMAN CINCINNATI OHIO USA CELLULOSE ACETATE MEMBRANES PENTA ERYTHRITOL BIS-2 CHLOROETHYL ETHER BIS-2 CHLOROISOPROPYL ETHER UREA TRI ETHYLENE GLYCOL DI PROPYLAMINE CHLORO BENZENE PROPYL BENZENE BENZONITRILE GAS CHROMATOGRAPHY MASS SPECTROMETRY BENZENE BENZONITRILE GAS CHROMATOGRAPHY MASS.
AN B 61040600.

<297>
AU DELFINO J J. DUBE D J.
YR 76.
TI PERSISTENT CONTAMINATION OF GROUND WATER BY PHENOL.
SO J ENVIRON SCI HEALTH PART A ENVIRON SCI ENG. 11 (6). 345-355.
DE WISCONSIN USA HUMAN POLLUTION TOXIC EFFECTS POTABLE WELL WATER POLLUTION AQUIFER DILUTION DEGRADATION.
AN B 77003367.

<298>
AU DELL'ACQUA R. BUSH B.
YR 73.
TI MICRO DETERMINATION OF GASOLINE IN POTABLE WATERS BY GAS CHROMATOGRAPHY.
SO INT J ENVIRON ANAL CHEM. 3 (2). (RECD 1974) 141-146.
DE POLLUTION HEXANE.
AN B 59039772.

<299>
AU DESMARCHELIER, JAMES M. FUKUTO, T. R.
IN DEP. ENTOMOL. UNIV. CALIFORNIA. RIVERSIDE. CALIF.
YR 74.
TI TOXICOLOGICAL EFFECTS PRODUCED BY SOME 1,3-BENZODIOXOLES, CATECHOLS, AND QUINONES IN CULEX MOSQUITO LARVAE.
SO J. ECON. ENTOMOL. 67. P153-8. 1974.
LG EN.
DE BENZODIOXOLE DERIV MOSQUITO TOXICITY. CATECHOL DERIV MOSQUITO TOXICITY. NAPHTHOQUINONE DERIV MOSQUITO TOXICITY. NAPHTHALENEDIOL DERIV MOSQUITO TOXICITY.
AN C 08121131535.

<300>
AU DIAMOND L.
YR 71.
TI METABOLISM OF POLY CYCLIC HYDRO CARBONS IN MAMMALIAN CELL CULTURES.
SO INT J CANCER. 8 (3). 451-462.
DE 3 4 BENZ PYRENE 7 12 DI METHYL BENZ A ANTHRACENE CARCINOGENS ALKALI EXTRACTABLE DERIVATIVES WATER SOLUBLE DERIVATIVES.
AN B 53056111.

<301>
AU DIAMOND L. CLARK H F.
YR 70.
TI COMPARATIVE STUDIES ON THE INTERACTION OF BENZO-A-PYRENE WITH CELLS DERIVED FROM POIKILOTHERMIC AND HOMEO THERMIC VERTEBRATES PART 1 METABOLISM OF BENZO-A-PYRENE.
SO J NAT CANCER INST. 45 (5). 1005-1012.
DE FISH TOAD LIZARD TURTLE RODENT CARCINOGEN CHLOROFORM METHANOL WATER EXTRACTION.
AN B 52032475.

<302>
AU DIETZ A S. TUOMINEN T. ALBRIGHT L J.
YR 76.
TI SUBLETHAL POLLUTANT EFFECTS UPON THE NATIVE MICRO FLORA OF GEORGIA STRAIT.
SO SHARPLEY, J. MILES AND ARTHUR M. KAPLAN (ED.). PROCEEDINGS OF THE THIRD INTERNATIONAL BIODEGRADATION SYMPOSIUM. KINGSTON, RHODE ISLAND, USA, AUGUST 17-23, 1975. XIV+1138P. ILLUS. APPLIED SCIENCE PUBLISHERS LTD: LONDON, ENGLAND. ISBN 0-85334-679-8. (RECD 1977) 1083-1090.
DE USA BACTERIA CRUDE OIL DIESEL FUEL SEWAGE EFFLUENT POLY CHLORINATED BI PHENYL RIVER SILT.
AN B 78019942.

<303>
AU DIETZ, F. KOPPE, P.
IN RUHRVERBAND/ESSEN. GER.
YR 72.
TI APPLICATION OF THIN-LAYER CHROMATOGRAPHY TO THE DETECTION OF TRACE MATERIALS IN WATER.
SO HAUS TECH. ESSEN, VORTRAGSVEROEFF. NO. 283. P17-28. 1972.
LG GE.
DE THIN LAYER CHROMATOG WATER ANALYSIS. PHENOL DETN WATER. HYDROCARBON DETN WATER. AROM HYDROCARBON DETN WATER. NITRO COMPD DETN WATER.
AN C 07726168452.

<304>
AU DIETZ, F. TRAUD, J. KOPPE, P. RUEBELT, C.
IN RUHRVERSTAND, CHEM. BIOL. LAB. ESSEN. GER.
YR 76.
TI SYSTEMS FOR THE IDENTIFICATION OF PHENOLIC COMPOUNDS BY THIN-LAYER CHROMATOGRAPHY.
SO CHROMATOGRAPHIA. 9. P380-96. 1976.

LG GE.
DE PHENOL DETN WATER CHROMATOG.
AN C 08608047159.

<305>

AU DIGGENS, A.
IN ORION RESEARCH, INC. 380 PUTNAM AVE. CAMBRIDGE, MA 02139.
YR 76.
TI INSTRUMENTATION AND AUTOMATIC CONTROL OF CYANIDE WASTE TREATMENT.
SO POLLUTION ENGINEERING, 8(3): 43- 45, MAR. 1976.
LG EN.
AB NONE.
ID METAL PLATING BATHS.
DE INDUSTRIAL EFFLUENTS, CYANIDES, METAL INDUSTRY WASTES, POLLUTION CONTROL EQUIPMENT, PH, WASTEWATER TREATMENT.
AN P 7604259.

<306>

AU DMITRIEV, M. T. KITROSSKII, N. A.
IN INST. OBSHCH. KOMMUNAL. GIG. IM. SYSINA. MOSCOW. USSR.
YR 69.
TI IONIZATION-CHROMATOGRAPHIC DETERMINATION OF SOME ORGANIC SUBSTANCES.
SO GIG. SANIT. 34. P69-74. 1969.
LG RS.
DE IONIZATION CHROMATOGRAPHIC DETN ORGS. CHROMATOGRAPHIC IONIZATION DETN ORGS. ORGS IONIZATION CHROMATOGRAPHIC DETN. ACETALDEHYDE DETN WASTE WATERS. ACETONE DETN WASTE WATERS. ACETONE DETN WASTE WATERS. ISOPROPYL ALC DETN WASTE WATERS. DIOXANE DETN WASTE WATERS. ACRYLONITRILE DETN WASTE WATERS.
AN C 07210047167.

<307>

AU DOCHERTY, A. C.
IN AGRIC. DIV. IMP. CHEM. IND. LTD. BILLINGHAM/TEESSIDE. ENGL.
YR 73.
TI ANALYSIS OF WASTE WATERS AND INTERPRETATION OF THE RESULTS.
SO PROC. SOC. ANAL. CHEM. 10. P201- 2. 1973.
LG EN.
DE REVIEW WASTEWATER ANALYSIS. CYANIDE EFFECT FISH REVIEW. PHENOL EFFECT FISH REVIEW. FISH POLLUTANT EFFECT REVIEW.
AN C 08306047708.

<308>

AU DOLGOVA L G. KUCHMA V N.
YR 74.
TI EFFECT OF BIO STIMULATORS ON RESISTANCE OF PLANTS TO INDUSTRIAL POLLUTION.
SO BIOL NAUKI (MOSC). 17 (11). (RECD 1975) 72-75.
DE POA-PRATENSIS PSEUDOBACTERIUM-LACTICUM PSEUDOMONAS-LIQUEFACIENS MICROORGANISMS PHENOL RESORCINOL PYRO CATECHOL DEHYDROGENASE ACTIVITY RHIZOSPHERE.
AN B 61051373.

<309>

AU DONAHUE, AUDREY E.
IN ENVIRONMENTAL PROTECTION AGENCY, CINCINNATI, OHIO.
YR 73. 394P*.
TI CHEMICAL ANALYSES FOR WATER QUALITY. TRAINING MANUAL.
PR PC$8.00/MF$1.45.
AB THIS TRAINING MANUAL CONTAINS OUTLINED INFORMATION USED BY LECTURERS WHEN PRESENTING TOPICS IN EPA-NTC COURSE 100, 'CHEMICAL ANALYSES FOR WATER QUALITY.' THE CONTENTS CONCERN INDIVIDUAL CONSTITUENTS FOUND IN WATER (E. G. DISSOLVED OXYGEN), INSTRUMENTAL METHODOLOGY (E. G. ATOMIC ABSORPTION) AND INFORMATION USEFUL TO ANALYSTS (E. G. STATISTICS). A SECTION OF LABORATORY PROCEDURES USED BY CLASS GROUPS IS ALSO INCLUDED.
MJ WATER-ANALYSIS, MANUALS, WATER-POLLUTION, WATER-ANALYSIS.
MN CRITERIA, ACIDITY, ALKALINITY, DISSOLVED-GASES, OXYGEN, AMMONIA, NITRATES, NITROGEN, CHLORINE, CARBON, CALCIUM, MAGNESIUM, ELECTRICAL-RESISTIVITY, PHOSPHORUS, CYANIDES, IRON, MANGANESE, PHENOLS, CHLORINE-AROMATIC-COMPOUNDS, DETERGENTS, SURFACTANTS, PESTICIDES, SPECTROSCOPIC-ANALYSIS, FLAME-PHOTOMETRY, ATOMIC-SPECTROSCOPY, ORGANIC-COMPOUNDS, GAS-CHROMATOGRAPHY, CHROMATOGRAPHY, INFRARED-SPECTROSCOPY, AUTOMATION, AERIAL-RECONNAISSANCE, LEGAL-PROCESSES, METALS.
ID WATER-POLLUTION-DETECTION, FWQA.
AN N PB-224 212/1.

<310>

AU DONALDSON W T.

YR 73.
TI A RESEARCH PROGRAM FOR IDENTIFYING AND MEASURING WATER POLLUTANTS.
SO INT J ENVIRON ANAL CHEM. 3. 1. P1-18. 1973.
LG EN.
MJ WATER-POLLUTION-CHEMICAL: AN.
MN ACTIVATION-ANALYSIS. COMPUTERS-DIGITAL. FURANS: AN. PYRIDINES: AN.
AN M 74125997.

<311>

AU DONCHENKO, N. A. ARSHANITS, N. M.
IN KIRISH. NEFTEPERERAB. ZAVOD. KIRISHI. USSR.
YR 74.
TI COMPARATIVE TOXICITY OF SEPARATE COMPONENTS OF WASTE WATERS FROM THE KIRISH PETROLEUM REFINERY THAT HAD UNDERGONE BIOLOGICAL PURIFICATION .
SO KHIM. TEKHNOL. TOPL. MASEL. P29- 32. 1974.
LG RS.
DE PETROLEUM REFINERY WASTEWATER TREATMENT. EMULSION PETROLEUM REFINERY WASTEWATER TREATMENT. CETANE PETROLEUM REFINERY WASTEWATER TREATMENT . DECALIN PETROLEUM REFINERY WASTEWATER TREATMENT. NAPHTHALENE PETROLEUM REFINERY WASTEWATER TREATMENT. BIOL PURIFN PETROLEUM REFINERY WASTEWATER TREATMENT.
AN C 08126175789.

<312>

AU DONOGHUE N A. GRIFFIN M. NORRIS D B. TRUDGILL P W.
YR 76.
TI THE MICROBIAL METABOLISM OF CYCLO HEXANE AND RELATED COMPOUNDS.
SO SHARPLEY, J. MILES AND ARTHUR M. KAPLAN (ED.). PROCEEDINGS OF THE THIRD INTERNATIONAL BIODEGRADATION SYMPOSIUM. KINGSTON, RHODE ISLAND, USA, AUGUST 17-23, 1975. XIV+1138P. ILLUS. APPLIED SCIENCE PUBLISHERS LTD: LONDON, ENGLAND. ISBN 0-85334-679-8. (RECD 1977) 43-56.
DE NOCARDIA ACINETOBACTER LACTONE OXYGEN ADIPATE FAD NADPH MONO OXYGENASE AEROBIC METABOLISM.
AN B 78019843.

<313>

AU DORE, M. LEGUBE, B. MERLET, N.
IN LAB. CHIM.- TRAIT. EAUX. INST. SCI. TECH. POITIERS. FR.
YR 75.
TI OXIDATION OF PHENOLS IN AQUEOUS MEDIA.
SO J. FR. HYDROL. 18. P53-62. 1975.
LG EN.
DE PHENOL OXIDN. CRESOL OXIDN. SALICYLIC ACID. CRESOTIC ACID.
AN C 08625189407.

<314>

AU DORRIS, TROY C. BURKS, STERLING L. CURD, MILTON R. WALLER, GEORGE R. BROEMELING, LYLE D.
IN OKLAHOMA WATER RESOURCES RESEARCH CENTER, STILLWATER.
YR 72. 116P.
TI IDENTIFICATION OF TOXIC COMPONENTS IN OIL REFINERY EFFLUENTS AND DETERMINATION OF THEIR EFFECT UPON THE AQUATIC BIOTA.
NT TECHNICAL COMPLETION REPT.
PR PC$3.00/MF$0.95.
AB CARBON ADSORPTION, SOLVENT EXTRACTION, STEAM DISTILLATION AND FLASH EVAPORATION TECHNIQUES WERE USED TO REMOVE ORGANIC FRACTIONS FROM OIL REFINERY EFFLUENTS. TOXICITY OF ORGANIC FRACTIONS WAS EVALUATED BY BIOASSAY WITH FATHEAD MINNOWS (PIMEPHALES PROMELAS) AND DAPHNIA (DAPHNIA MAGNA). DEMONSTRABLY TOXIC FRACTIONS WERE SUBJECTED TO GAS CHROMATOGRAPHY AND COMBINATION GAS CHROMATOGRAPHY - MASS SPECTROMETRY ANALYSES. CONCENTRATIONS OF TOXIC HEAVY METALS IN THE REFINERY EFFLUENTS WERE ANALYZED BY ATOMIC ABSORPTION SPECTROPHOTOMETRY. THE FLASH EVAPORATION TECHNIQUE REMOVED MOST OF THE ACUTE TOXINS FROM THE EFFLUENT SAMPLES. COMPOUNDS TENTATIVELY IDENTIFIED WERE CRESOL, DIMETHYL PHENOL OR ETHYL PHENOL, HENEICOSANE, DOCOSANE, TRICOSANE, AND PENTACOSANE. IT WAS FOUND THAT THE COMBINED CONCENTRATION OF SEVERAL OF THE HEAVY METALS COULD BE DELETERIOUS TO AQUATIC ORGANISMS. (AUTHOR).
MJ REFINERIES, WATER-POLLUTION, WATER-POLLUTION, INDUSTRIAL-WASTES, TOXICOLOGY, INDUSTRIAL-WASTES, WATER- ANALYSIS, INDUSTRIAL-WASTES.
MN FISHES, BIOASSAY, DAPHNIA, MINNOWS, GAS-CHROMATOGRAPHY, MASS-SPECTROSCOPY, METALS, ATOMIC-SPECTROSCOPY, PHENOLS, HYDROCARBONS, PETROLEUM-REFINING.
ID PETROCHEMICAL-INDUSTRY, WATER-

POLLUTION-EFFECTS-ANIMALS, PIMEPHALES-PROMELAS.
AN N PB-213 493/0.

<315>
AU DOUDOROFF, PETER.
IN OREGON STATE UNIV. CORVALLIS. DEPT. OF FISHERIES AND WILDLIFE. ENVIRONMENTAL RESEARCH LAB. DULUTH, MINN.
YR 76. 161P*.
TI TOXICITY TO FISH OF CYANIDES AND RELATED COMPOUNDS. A REVIEW.
NT FINAL REPT.
PR PC$6.75/MF$2.25.
AB THE WORLD LITERATURE ON THE TOXICITY TO FISH OF SIMPLE AND COMPLEX CYANIDES, NITRILES, CYANOGEN CHLORIDE, THIOCYANATES, AND CYANATES IS REVIEWED. DIFFERENTLY DETERMINED LIMITS OF TOXICANT CONCENTRATIONS TOLERATED BY VARIOUS FISHES ARE COMPARED, AND THEIR VARIATION WITH EXPOSURE TIME, THE PH, TEMPERATURE, AND DISSOLVED OXYGEN AND MINERAL CONTENT OF THE WATER, BODY SIZE, AGE, ACCLIMATION, ETC. IS EXAMINED. INTERACTIONS OF FREE CYANIDE WITH OTHER TOXIC WATER POLLUTANTS ALSO ARE CONSIDERED. AVAILABLE DATA ON EFFECTS OF SUBLETHAL LEVELS OF FREE CYANIDE ON GROWTH, FOOD CONSUMPTION AND UTILIZATION, SWIMMING ABILITY, BEHAVIOR, ETC. AND OBSERVATIONS ON AVOIDANCE REACTIONS OF FISH TO THE TOXICANT ARE SUMMARIZED AND THEIR ECOLOGICAL SIGNIFICANCE IS DISCUSSED. SOME CONCLUSIONS REGARDING ACCEPTABLE CONCENTRATIONS OF FREE CYANIDE IN RECEIVING WATERS ARE PRESENTED.
MJ TOXICITY, CYANIDES, FISHES.
MN WATER-POLLUTION, TOXIC- TOLERANCES, GROWTH, AQUATIC- ANIMALS, TOXICOLOGY, REVIEWS, NITRILES, CYANATES, MINERALS, THIOCYANATES, CYANOGEN, EXPOSURE, PH, TEMPERATURE, DISSOLVED-GASES, OXYGEN, ECOLOGY, PHYSIOLOGICAL- EFFECTS.
ID WATER-POLLUTION-EFFECTS-ANIMALS, TOXIC-HAZARDS, NTISEPAORD.
AN N PB-253 528/4SL.

<316>
AU DRAHORAD, JOSEF. NOVOTNY, JAROSLAV. CERNY, KAREL.
IN USTAV VYZK. VYUZITI PALIV. BECHOVICE. CZECH.
YR 71.
TI PURIFICATION OF GENERATOR GAS AND SEPARATION OF TARS FROM PHENOLIC EFFLUENTS.
SO PLYN. 51. P266-72. 1971.
LG CZ.
DE COAL GENERATOR GAS PURIFN.
AN C 07616089684.

<317>
AU DUBE, D J. DELFINO, J J.
IN UNIV. OF WISCONSIN, LAB. OF HYGIENE, 465 HENRY MALL, MADISON, WI 53706.
YR 76.
TI PERSISTENT CONTAMINATION OF GROUND WATER BY PHENOL.
SO JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH--PART A, A11(6): 345- 355, 1976.
LG EN.
AB NONE.
ID PHENOL, CHEMICAL SPILLS.
DE ACCIDENTS, PUBLIC HEALTH, CHEMICAL POLLUTANTS, GROUNDWATER CONTAMINATION, HYDROCARBONS.
AN P 7605385.

<318>
AU DUFFEY S S. BLUM M S.
YR 77.
TI PHENOL AND GUAIACOL BIOSYNTHESIS DE TOXICATION AND FUNCTION IN A POLYDESMID MILLIPEDE OXIDUS-GRACILIS.
SO INSECT BIOCHEM. 7 (1). 57-66.
DE EURYURUS-MACULATUS PSEUDOPOLYDESMUS-ERASUS PLANTS BACTERIA TYROSINE PHENOLASE EC-4.1.99.2 CARBON-14 HYDROGEN CYANIDE THIO CYANATE RHODANESE BETA CYANO ALANINE ASPARAGINE PHENOL BETA-D GLYCOSIDE HYDRO QUINONE BETA-D GLYCOSIDE ARBUTIN EVOLUTION BIOCHEMICAL PATHWAY CYANOGENIC GLAND DEFENSE.
AN B 64027232.

<319>
AU DUFFIELD, G A.
IN BRITISH COLUMBIA DEPT. OF HEALTH, ENVIRONMENTAL ENGINEERING DIV. CAN.
YR 75.
TI INTERPRETATION OF CHEMICAL ANALYSIS.
SO BRITISH COLUMBIA WATER AND WASTE SCHOOL: FOURTEENTH. VANCOUVER, B.C. CAN. UNIVERSITY OF BRITISH COLUMBIA, CENTRE FOR CONTINUING EDUCATION, (1975?). PP. 113-121.
LG EN.

AB NONE.
ID PHENOLS, HARDNESS.
DE WASTEWATER TREATMENT, TURBIDIMETRY, SULFUR COMPOUNDS, MANGANESE, ALKALINITY, IRON, FLUORIDES, CHLORINE COMPOUNDS, CHEMICAL ANALYSIS.
AN P 7601284.

<320>

AU DUHART, BENJAMIN THOMAS.
IN HOWARD UNIVERSITY (0088) PH.D. 1971 204PP.
YR 71.
TI ELECTROLYTIC OXIDATION OF AROMATIC AMINES AND PHENOLS.
SO DAI V32(11), SEC B, P6256.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG72-14053.

<321>

AU DULAR, MILAN. KOTNIK, DUSAN.
IN ODDELEK KEM. FNT. LJUBLJANA. YUGOSLAVIA.
YR 70.
TI DETERMINATION OF THE BIOLOGICAL OXYGEN DEMAND AND TOXICITY OF PHENOL WASTE WATER FROM A GAS GENERATING STATION.
SO RUD.-MET. ZB. P307-12. 1970.
LG SN.
DE BOD PHENOLIC WASTE WATER. TOXICITY PHENOLIC WASTE WATER. PHENOLIC WASTE WATER ANAL.
AN C 07504024969.

<322>

AU DUNCAN, R. M.
IN ALUM. CO. CANADA, LTD. ARVIDA. QUE.
YR 69.
TI GAS-CHROMATOGRAPHIC DETERMINATION OF BENZO(A)PYRENE USING ELECTRON CAPTURE.
SO AMER. IND. HYG. ASS. J. 30. P624- 9. 1969.
LG EN.
DE GAS CHROMATOG BENZOPYRENES. BENZOPYRENES GAS CHROMATOG. COMBUSTION EFFLUENTS BENZOPYRENES DETN.
AN C 07214070341.

<323>

AU DUNLAP W J. SHEW D C. SCALF M R. COSBY R L. ROBERTSON J M.
YR 76.
TI ISOLATION AND IDENTIFICATION OF ORGANIC CONTAMINANTS IN GROUND WATER.
SO KEITH, LAWRENCE H. IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER. CONGRESS. MEXICO CITY, MEXICO, DEC. 1975. X+718P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40131-2. 453- 477.
DE POLLUTION CRUDE CARBON CHLOROFORM EXTRACT CARBON ALCOHOL EXTRACT GAS CHROMATOGRAPHY MASS SPECTROMETRY.
AN B 77007305.

<324>

AU DUNN B P. STICH H F.
YR 76.
TI MONITORING PROCEDURES FOR CHEMICAL CARCINOGENS IN COASTAL WATERS.
SO J FISH RES BOARD CAN. 33 (9). 2040-2046.
DE MYTILUS-EDULIS POLLUTION BENZO A PYRENE EXTRACTION PURIFICATION THIN LAYER CHROMATOGRAPHY FLUOROMETRY GAS CHROMATOGRAPHY.
AN B 77027488.

<325>

AU DUNN, B P.
IN UNIV. OF BRITISH COLUMBIA, CANCER RESEARCH CENTER, 2075 WESTBROOK PL. VANCOUVER, B.C. V6T 1W5, CAN.
YR 76.
TI TECHNIQUES FOR DETERMINATION OF BENZO(A)PYRENE IN MARINE ORGANISMS AND SEDIMENTS.
SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, 10(10): 1018-1021, OCT. 1976.
LG EN.
AB NONE.
ID BENZO(A)PYRENE.
DE CARCINOGENS, MARINE ORGANISMS, MARINE ENVIRONMENTS, SEDIMENTS, WATER POLLUTANTS, HYDROCARBONS, AROMATIC COMPOUNDS.
AN P 7700430.

<326>

AU DUNN, BRUCE P. STICH, HANS F.
IN CANCER RES. CENT. UNIV. BRITISH COLUMBIA. VANCOUVER. B. C.
YR 76.
TI RELEASE OF THE CARCINOGEN BENZO(A)PYRENE FROM ENVIRONMENTALLY CONTAMINATED MUSSELS.
SO BULL. ENVIRON. CONTAM. TOXICOL. 15. P398-401. 1976.
LG EN.

DE BENZOPYRENE CONTAMINATION MUSSEL. WATER POLLUTION BENZOPYRENE MUSSEL .
AN C 08505029326.

<327>
AU DUNSTAN P M. ANTHONY C. DRABBLE W T.
YR 72.
TI MICROBIAL METABOLISM OF 1 CARBON COMPOUNDS AND 2 CARBON COMPOUNDS THE INVOLVEMENT OF GLYCOLLATE IN THE METABOLISM OF ETHANOL AND OF ACETATE BY PSEUDOMONAS AM-1.
SO BIOCHEM J. 128 (1). 99-106.
DE ALCOHOL DEHYDROGENASE MALATE SYNTHASE ISO CITRATE LYASE.
AN B 54057088.

<328>
AU DUNSTAN P M. DUNSTAN M. ANTHONY C. DRABBLE W T.
YR 72.
TI MICROBIAL METABOLISM OF THE 1 CARBON COMPOUNDS AND 2 CARBON COMPOUNDS THE ROLE OF GLYOXYLATE GLYCOLLATE AND ACETATE IN THE GROWTH OF PSEUDOMONAS AM-1 ON ETHANOL AND ON 1 CARBON COMPOUNDS.
SO BIOCHEM J. 128 (1). 107-115.
DE HYDROXY PYRUVATE REDUCTASE SERINE GLYOXYLATE AMINO TRANSFERASE GLYCERATE KINASE METHANOL DEHYDROGENASE METHYLAMINE DEHYDROGENASE GLYCERATE KINASE.
AN B 54057089.

<329>
AU DUNSTAN, PATRICIA M. ANTHONY, C.
IN DEP. PHYSIOL. BIOCHEM. UNIV. SOUTHAMPTON. SOUTHAMPTON. ENGL.
YR 73.
TI MICROBIAL METABOLISM OF C1 AND C2 COMPOUNDS. ROLE OF ACETATE DURING GROWTH OF PSEUDOMONAS AM1 ON C1 COMPOUNDS, ETHANOL, AND BETA. -HYDROXYBUTYRATE.
SO BIOCHEM. J. 132. P797-801. 1973.
LG EN.
DE PSEUDOMONAS ACETATE METAB. METHANOL METAB PSEUDOMONAS. HYDROXYBUTYRATE PSEUDOMONAS. ETHANOL PSEUDOMONAS.
AN C 07909050653.

<330>
AU DUNSTAN, W. M. ATKINSON, L. P. NATOLI, J.
IN SKIDAWAY INST. OF OCEANOGRAPHY, SAVANNAH, GA. FOUNDATION, WASHINGTON, D.C. OFFICE FOR THE INTERNATIONAL DECADE OF OCEAN EXPLORATION. 934.
YR 75. 7P.
TI STIMULATION AND INHIBITION OF PHYTOPLANKTON GROWTH BY LOW MOLECULAR WEIGHT HYDROCARBONS.
NT SPONSORED IN PART BY OFFICE OF NAVAL RESEARCH, ARLINGTON, VA.
AV PUB. IN MARINE BIOLOGY, V31 P305-310 1975.
PR NOT AVAILABLE NTIS.
AB EXPERIMENTS ON 4 PHYLOGENETICALLY DIFFERENT PHYTOPLANKTON EXPOSED IN CULTURE TO A RANGE OF CONCENTRATIONS OF BENZENE, TOLUENE AND XYLENE SHOWED A VARIETY OF GROWTH RESPONSES FOR MARINE MICROALGAE. THE DEGREE OF INFLUENCE OF THESE AROMATIC HYDROCARBONS, ALL COMPONENTS OF FUEL OILS AND CRUDE OILS, VARIED WITH CONCENTRATION, COMPOUND AND SPECIES. THE SPECIES- SPECIFIC STIMULATION OF LOW CONCENTRATIONS WAS FURTHER SHOWN IN EXPERIMENTS WITH MIXTURES OF NO. 2 FUEL OIL. THE VOLATILE FRACTION WAS MOST BIOLOGICALLY REACTIVE, BEING THE SOURCE OF GROWTH ENHANCEMENT AT LOW LEVELS AND A MAJOR GROWTH INHIBITOR AT HIGH CONCENTRATIONS. THUS, A SIGNIFICANT ENVIRONMENTAL EFFECT OF OIL ON MARINE PRIMARY PRODUCTION COULD BE THE GROWTH STIMULATION OF PARTICULAR SPECIES BY LOW MOLECULAR WEIGHT AROMATIC COMPOUNDS RESULTING IN AN ALTERATION OF THE NATURAL PHYTOPLANKTON COMMUNITY STRUCTURE AND ITS TROPHIC RELATIONSHIPS.
MJ PLANKTON, PHYTOPLANKTON, HYDROCARBONS.
MN XYLENES, BENZENE, TOLUENE, AQUATIC-MICROBIOLOGY, PRIMARY-BIOLOGICAL-PRODUCTIVITY, CULTURES-BIOLOGY, ALGAE, AROMATIC-HYDROCARBONS, FUEL-OIL, WATER-POLLUTION, CRUDE-OIL, VOLATILITY, GROWTH-REGULATORS, INHIBITORS, MARINE-BIOLOGY.
ID AMPHIDINIUM-CARTERAE, WATER-POLLUTION-EFFECTS-PLANTS, OIL-POLLUTION, SKELETONEMA-COSTATUM, DUNALIELLA-TERTIOLECTA, CRICOSPHAERA- CARTERAE, REPRINTS, NTISIDOE, NTISNSFG, NTISDODN.
AN N PB-248 697/5SL.

<331>
AU DURHAM, NORMAN D.

IN DEP. OF MICROBIOL. OKLAHOMA STATE UNIV. STILLWATER. OKLA.
YR 70.
TI MODE OF FISSION OF BENZENE NUCLEUS IN THE MICROORGANISMS AND REGULATION OF CELL GROWTH AND DIVISION BY BENZENE DERIVATIVES.
PG 10 PP.
LG EN.
DE BENZENE METAB FLAVOBACTERIUM. FLAVOBACTERIUM BENZENE METAB. TRYPTOPHAN METAB FLAVOBACTERIUM.
AN C 07323117583.

<332>

AU DUST J V. THOMPSON W S.
YR 72.
TI POLLUTION CONTROL IN THE WOOD PRESERVING INDUSTRY PART 3 CHEMICAL AND PHYSICAL METHODS OF TREATING WASTE WATER.
SO FOR PROD J. 22 (12). 25-30.
DE OXYGEN DEMAND PHENOL.
AN B 73033346.

<333>

AU EARHART, JONATHAN P. WON, KWANG W. KING, C. JUDSON. PRAUSNITZ, JOHN M.
IN CALIFORNIA UNIV. BERKELEY. DEPT. OF CHEMICAL ENGINEERING. KERR ENVIRONMENTAL RESEARCH LAB. ADA, OKLA. 404 601.
YR 76. 531P.
TI EXTRACTION OF CHEMICAL POLLUTANTS FROM INDUSTRIAL WASTEWATERS WITH VOLATILE SOLVENTS.
NT FINAL REPT. 1971-75.
PR PC A23/MF A01.
AB SOLVENT EXTRACTION WITH VOLATILE SOLVENTS WAS STUDIED AS A METHOD FOR TREATING WASTEWATERS FROM PETROLEUM REFINERIES AND PETROCHEMICAL PLANTS. EXTRACTION IS MOST ATTRACTIVE WHEN THE LOADING OF ORGANICS IS HIGH, WHEN SUBSTANCES ARE PRESENT WHICH POSE DIFFICULTIES FOR BIOLOGICAL OXIDATION, AND/OR WHEN THE CHEMICAL VALUE OF RECOVERED ORGANICS IS HIGH. VOLATILE SOLVENTS (ISOBUTYLENE AND ISOBUTANE) WERE GIVEN PARTICULAR ATTENTION, SINCE THEY ARE EASILY REGENERATED AND SINCE THEY HAVE A LOW SOLUBILITY IN THE EFFLUENT WATER. EQUILIBRIUM DISTRIBUTION COEFFICIENTS WERE DETERMINED FOR NUMEROUS SYSTEMS OF WATER, VARIOUS SOLVENTS AND VARIOUS SOLUTES, AND CORRELATIONS OF THESE COEFFICIENTS WERE DEVELOPED. A MINIPLANT EXTRACTION FACILITY WAS USED TO DEMONSTRATE THE CAPABILITIES OF EXTRACTION FOR TREATMENT OF SEVEN DIFFERENT INDUSTRIAL WASTEWATERS, AND FOR THE PURPOSE OF ANALYZING THE UNDERLYING MASS TRANSFER AND AXIAL MIXING BEHAVIOR. THE SCALE-UP OF THE EXTRACTION SYSTEM AND THE LOGIC OF SELECTING EXTRACTION PROCESSES FOR WASTEWATER TREATMENT ARE EXPLORED AT LENGTH.
MJ WATER-POLLUTION-CONTROL. REFINERIES, SOLVENT-EXTRACTION, PETROCHEMISTRY, PETROLEUM-INDUSTRY.
MN INDUSTRIAL-WASTE-TREATMENT, SOLVENTS, ORGANIC-COMPOUNDS, SEPARATION, MATERIALS-RECOVERY, PHENOLS, PROCESS-CHARTING, STRIPPING- DISTILLATION, VOLATILITY, EXPERIMENTAL-DESIGN, OILS, ETHYLENE, CHLORINATION, FORMALDEHYDE, STYRENE, MASS-TRANSFER, CONTINUOUS.
ID LIQUID-WASTES, OIL-WATER-SEPARATORS, ROTATING-DISC-SEPARATORS, PROCEDURES, SPRAY-COLUMN- EXTRACTORS, NTISEPAORD, NTISUCLA.
AN N PB-266 241/9SL.

<334>

AU EBERLE S H. HOESLE C. HOYER O. KRUECKEBERG C.
YR 75.
TI THE ANALYSIS OF ORGANIC WATER POLLUTANTS ESPECIALLY LIGNIN SULFONIC-ACID BY MEANS OF DIFFERENTIAL PULSE POLAROGRAPHY.
SO HUSMANN, W. (ED.). VOM WASSER, BAND 43. (ON WATER, VOL. 43.). (IN GER.). VIII+584P. ILLUS. VERLAG CHEMIE: WEINHEIM, WEST GERMANY. ISBN 3-527-25594-X. 359-380.
DE RHINE RIVER EUROPE NEW METHOD NITROUS-ACID TOTAL ORGANIC CARBON PHENOLS AROMATIC AMINES NITRO COMPOUNDS QUINONES ALDEHYDES KETONES AZO COMPOUNDS.
AN B 75094654.

<335>

AU EDELINE, F. ZOLEDZIOWSKA, J.
IN INSTITUT DE L'INDUSTRIE ORGANIQUE, VARSOVIE.
YR 73.
TI ETUDE DE LA BIODEGRADABILITE DES PETITES CONCENTRATIONS DE PHENOLS DANS L'EAU DE RIVIERE.
SO CENTRE BELGE D'ETUDE ET DE

DOCUMENTATION DES EAUX ET DE L'AIR. TRIBUNE DU CEBEDEAU, 26(354): 231-234, MAY 1973.
LG FR.
AB NONE.
ID PHENOLS.
DE AROMATIC COMPOUNDS, BELGIUM, BIODEGRADATION, CHEMICAL OXIDATION, INDUSTRIAL EFFLUENTS, MICROBIAL DEGRADATION, RIVERS.
AN P 7501684.

<336>

AU EGANHOUSE, ROBERT P. CALDER, JOHN A.
IN FLORIDA STATE UNIV. TALLAHASSEE. DEPT. OF OCEANOGRAPHY. SCIENCE FOUNDATION, WASHINGTON, D.C. OFFICE FOR THE INTERNATIONAL DECADE OF OCEAN EXPLORATION. 407 468.
YR 75. 8P.
TI THE SOLUBILITY OF MEDIUM MOLECULAR WEIGHT AROMATIC HYDROCARBONS AND THE EFFECTS OF HYDROCARBON CO-SOLUTES AND SALINITY.
AV PUB. IN GEOCHIMICA ET COSMOCHIMICA ACTA, V40 P555-561 1976.
PR NOT AVAILABLE NTIS.
AB THE SOLUBILITIES OF SEVERAL MEDIUM MOLECULAR WEIGHT AROMATIC HYDROCARBONS WERE DETERMINED AT 25C IN AQUEOUS BINARY, TERNARY, AND QUATERNARY SYSTEMS. IN BINARY SYSTEMS AT S O/OO = 0, SOLUBILITIES RANGED FROM 31.3 PPM FOR NAPHTHALENE TO 1.07 PPM FOR PHENANTHRENE. THE ALKYL NAPHTHALENES EXHIBITED SOLUBILITIES WHICH WERE A FUNCTION OF MOLAR VOLUME AND SUBSTITUENT SIZE AND POSITION. IN TERNARY AND QUATERNARY SYSTEMS, SOLUBILITIES OFTEN DEVIATED FROM VALUES OBTAINED IN BINARY SYSTEMS PRESUMABLY DUE TO SOLUTE-SOLUTE INTERACTIONS AND/OR FORMATION OF SOLID SOLUTIONS. AROMATIC HYDROCARBONS ARE 'SALTED OUT' BY INCREASING CONCENTRATIONS OF INORGANIC SALTS. AT S O/OO = 35, THE SOLUBILITY OF NAPHTHALENE IS 22.0 PPM AND OF PHENANTHRENE, 0.71 PPM. THE EMPIRICAL SALTING PARAMETERS ARE IDENTICAL IN BOTH BINARY AND QUATERNARY SYSTEMS.
MJ SOLUBILITY, AROMATIC-HYDROCARBONS.
MN SALINITY, SALT-WATER, REPRINTS, NAPHTHALENE, PHENANTHRENE, BIPHENYL.
ID NTISIDOE, NTISNSFG.
AN N PB-258 181/7SL.

<337>

AU EICHELBERGER, JAMES W. DRESSMAN, RONALD C. LONGBOTTOM, JAMES E.
IN FWPCA, ANALYTIC QUALITY CONTROL LAB. ORGANIC ANALYSES GROUP, CINCINNATI, OH.
YR 70.
TI SEPARATION OF PHENOLIC COMPOUNDS FROM CARBON CHLOROFORM EXTRACT FOR INDIVIDUAL CHROMATOGRAPHIC IDENTIFICATION AND MEASUREMENT.
SO ENVIRONMENTAL SCIENCE AND TECHNOLOGY, WASH. D. C.4(7):576-578, JULY 1970.
LG EN.
AB NONE.
ID IDENTIFICATION AND MEASUREMENT, POLLUTANT ANALYSIS, WATER ANALYSIS.
DE PHENOL, GAS-LIQUID CHROMATOGRAPHY.
AN P 7002772.

<338>

AU EIRING, L. V.
IN USSR.
YR 69.
TI KINETICS AND MECHANISM OF OZONE OXIDATION OF CYANIDE-CONTAINING WASTE WATERS.
SO TSVET. METAL. 42. P73-6. 1969.
LG RS.
DE ZINC CYANIDE COMPLEXES OZONE. IRON CYANIDE COMPLEXES OZONE. ARSENIC CYANIDE COMPLEXES OZONE. OZONE CYANIDES WASTE WATERS. CYANIDES WASTE WATERS OZONE. LEAD REMOVAL WASTE WATERS.
AN C 07302006964.

<339>

AU EL-DIB, M. A.
IN WATER POLLUT. CONTROL. NATL. RES. CENT. CAIRO. UAR.
YR 71.
TI COLORIMETRIC DETERMINATION OF ANILINE DERIVATIVES IN NATURAL WATERS.
SO J. ASS. OFFIC. ANAL. CHEM. 54. P1383-7. 1971.
LG EN.
DE ANILINE HERBICIDE WATER DETN.
AN C 07613069024.

<340>

AU ELDRIDGE M B. ECHEVERRIA T. WHIPPLE J A.
IN NATL. MAR. FISH. SERV. SOUTHWEST FISH. CENT. TIBURON LAB. 3150 PARADISE DR. TIBURON, CALIF. 94920,

USA.
YR 77.
TI ENERGETICS OF PACIFIC HERRING CLUPEA-HARENGUS-PALLASI EMBRYOS AND LARVAE EXPOSED TO LOW CONCENTRATIONS OF BENZENE A MONO AROMATIC COMPONENT OF CRUDE OIL.
SO TRANS AM FISH SOC. 106 (5). 452-461.
LG EN.
DE ROTIFER INGESTION.
AN B 65037032.

<341>
AU ELLIS B E.
YR 77.
TI DEGRADATION OF PHENOLIC COMPOUNDS BY FRESH WATER ALGAE.
SO PLANT SCI LETT. 8 (3). 213-216.
DE ANABAENA-CYLINDRICA CHLAMYDOMONAS-ULVAENSIS CHLORELLA-PYRENOIDOSA EUGLENA-GRACILIS PHORMIDIUM-FOVEOLARUM SCENEDESMUS-BASILIENSIS CATECHOL.
AN B 64014192.

<342>
AU EMEL'YANOVA, E. A. RYABCHENKO, N. S. LUTSENKO, P. G.
IN POLYARN. NAUCHNO-ISSLED. INST. RYBN. KHOZ. OKEANOGR. MURMANSK. USSR.
YR 77.
TI EFFECT OF SOME ELECTROLYTES ON THE COAGULATION OF ORGANIC POLLUTANTS IN WASTE WATERS.
SO RYBN. KHOZ. (MOSCOW). P76-9. 1977.
LG RS.
DE ACETIC ACID FISH PROCESSING WASTEWATER. HYDROCHLORIC ACID FISH PROCESSING WASTEWATER. FAT COLLOID FISH PROCESSING WASTEWATER. PROTEIN COLLOID FISH PROCESSING WASTEWATER. FISH PROCESSING WASTEWATER TREATMENT.
AN C 08706043693.

<343>
AU EMERY, RICHARD M.
IN UNIV. OF WASHINGTON, DEPT. OF CIVIL ENGINEERING, WATER AND AIR RESOURCES DIV. SEATTLE.
YR 70.
TI THE COMPARATIVE ACUTE TOXICITY OF CRESOL TO TWO BENTHIC CRUSTACEANS.
SO WATER RESEARCH. NEW YORK, 4(7): 485-491, JULY 1970.
LG EN.
AB NONE.
ID TOXICITY, *GAMMARUS FASCIATUS, *ASELLUS MILITARIS, CRESOL.
DE BENTHIC COMMUNITIES, PHENOL, INDUSTRIAL WASTES.
AN P 7006934.

<344>
AU ENGELHARDT G. RAST H G. WALLNOEFER P R.
IN BAYERISCHE LANDESANSTALT BODENKULT. PFLANZENB. ABT. PFLANZENSCHUTZ, MENZINGER STR. 54, D 8000 MUENCHEN 19, W. GER.
YR 77.
TI BACTERIAL METABOLISM OF SUBSTITUTED PHENOLS OXIDATION OF 4 METHYL MERCAPTO PHENOL AND 4 METHYLSULFINYL PHENOL BY NOCARDIA-SP DSM-43251 .
SO ARCH MICROBIOL. 114 (1). 25-34.
LG EN.
DE NOCARDIA-CALCAREA PESTICIDE DEGRADATION GLUCOSE CATECHOL.
AN B 65001578.

<345>
AU ENGELHARDT, GABRIELE. WALLNOEFER, P. R. RAST, H. G. FIEDLER, F.
IN ABT. PFLANZENSCHUTZ. BAYER LANDESANST. BODENKULT. PLANZENBAU. MUNICH . GER.
YR 76.
TI METABOLISM OF O-PHTHALIC ACID BY DIFFERENT GRAM-NEGATIVE AND GRAM-POSITIVE SOIL BACTERIA.
SO ARCH. MICROBIOL. 109. P109-14. 1976.
LG EN.
DE PHTHALIC ACID METAB BACTERIA. BENZOIC ACID METAB BACTERIA. PROTOCATECHUATE METAB BACTERIA. SALICYLIC ACID METAB BACTERIA. TEREPHTHALIC ACID METAB BACTERIA.
AN C 08517119418.

<346>
AU ENGLEHARDT G. WALLNOFER P R. HUTZINGER O.
IN BAYER LANDESANSTALDT FUR BODENKULTUR UND PFLANZENBAU, MUNCHEN, GERMANY.
YR 75.
TI THE MICROBIAL METABOLISM OF DI-N-BUTYL PHTHALATE AND RELATED DIALKYL PHTHALATES.
SO BULL ENVIRON CONTAM TOXICOL. 13. 3. P342-7. MAR 75.
LG EN.
MJ ARTHROBACTER: ME. PHTHALIC- ACIDS: ME, (PHTHALIC-ACID).
MN CULTURE-MEDIA.

AN M 75147234.

<347>

AU ENSIGN, JERALD COLEMAN.
IN UNIVERSITY OF SOUTHERN CALIFORNIA (0208) PH.D. 1963 215PP.
YR 63.
TI THE BACTERIAL METABOLISM OF PYRIDINE, 2-HYDROXYPYRIDINE AND NICOTINIC ACID.
SO DAI V24(01) P0031.
DE BACTERIOLOGY (0301).
AN D ADG63-04220.

<348>

AU ENSMINGER A. ALBRECHT P. OURISSON G. KIMBLE B J. MAXWELL J R. EGLINTON G.
YR 72.
TI HOMO HOPANE IN MESSEL OIL SHALE 1ST IDENTIFICATION OF 31 CARBON PENTA CYCLIC TRI TERPANE IN NATURE BACTERIAL ORIGIN OF SOME TRI TERPANES IN ANCIENT SEDIMENTS.
SO TETRAHEDRON LETT. 36. 3861-3864.
DE EOCENE.
AN B 73014647.

<349>

AU EPLER, PIOTR.
IN INST. ZOOL. STOSOW. WYZSZA SZK. ROLN. CRACOW. POL.
YR 71.
TI EFFECT OF POLLUTION OF WATERS ON THEIR ICHTHYOFAUNA. II. TOXICITY OF AMMONIA, PHENOLS, AND CYANIDES.
SO POSTEPY NAUK ROLN. P67-90. 1971.
LG PO.
DE REVIEW FISH TOXICITY POLLUTANT. AMMONIA FISH TOXICITY REVIEW. PHENOL FISH TOXICITY REVIEW. CYANIDE FISH TOXICITY REVIEW.
AN C 07701001398.

<350>

AU ERICKSON, R. E. BARDWELL, C. SOSEBEE, J.
IN MONTANA STATE UNIV. BOZEMAN. WATER RESOURCES RESEARCH CENTER. OFFICE OF WATER RESEARCH AND TECHNOLOGY, WASHINGTON, D.C.
YR 75. 16P.
TI PHENOLS IN THE CLARK FORK RIVER.
NT COMPLETION REPT.
PR PC$3.50/MF$2.25.
AB THE OBJECTIVE WAS TO DETERMINE THE NATURE AND AMOUNTS OF PHENOLS IN THE CLARK FORK RIVER. THESE COMPOUNDS, WHICH ARE A NATURAL PART OF THE EFFLUENT OF KRAFT PULP MILLS AND ARE DISCHARGED EVERY SPRING INTO THE CLARK FORK, ARE KNOWN TO BE TOXIC AT HIGH CONCENTRATIONS TO SOME SPECIES AND TO IMPAIR THE FLAVOR OF FISH AT VERY LOW CONCENTRATIONS. THE STANDARD METHOD FOR DETERMINING PHENOLS WAS LIKELY TO BE UNSUITABLE FOR DETERMINING THE TYPE OF PHENOLS FOUND IN PULP MILL EFFLUENT. AN ADDED OBJECTIVE WAS, THEREFORE, TO COMPARE THE STANDARD METHOD WITH A MORE SOPHISTICATED GAS CHROMATOGRAPHIC TECHNIQUE FOR THE ANALYSIS OF PHENOLS. THE EFFLUENT FROM THE HOERNOR WALDORF MILL CONTAINS A NUMBER OF PHENOLIC COMPOUNDS. GAS CHROMATOGRAPHIC SEPARATION OF A CONCENTRATED SOLUTION FOLLOWED BY MASS SPECTROSCOPY REVEALED SEVENTEEN DIFFERENT COMPOUNDS IN THE PHENOLIC FRACTION, ONLY TWO OF WHICH, P-CRESOL AND PROPYL PHENOL WERE POSITIVELY IDENTIFIED. P-CRESOL WAS FOUND TO BE IN THE LARGEST SINGLE CONCENTRATION. THE MILL IS NOW USING SECONDARY TREATMENT ON THEIR EFFLUENT, WHICH SHOULD LOWER THEIR PHENOLIC CONTENT. HOWEVER, SOME CAUTION MUST BE EXERCISED BECAUSE TWO OTHER FACTORS--FREQUENT SHUTDOWNS OF THE PLANT DURING 1975 AND RELATIVELY HIGH FLOW OF THE CLARK FORK THROUGHOUT THE YEAR--WOULD TEND TO LOWER THE CONCENTRATION OF PHENOLIC COMPOUNDS IN THE RIVER.
MJ STREAM-POLLUTION, PHENOLS, CLARK-FORK-RIVER, INDUSTRIAL-WASTES.
MN CONCENTRATION-COMPOSITION, SULFATE-PULPING, WOOD-PULP, SOURCES, WATER-ANALYSIS, GAS- CHROMATOGRAPHY, SETTLING-BASINS, FISHES, WATER-QUALITY, CORRELATION-TECHNIQUES, TOXICITY, MONTANA.
ID PATH-OF-POLLUTANTS, NTISDIOWRT.
AN N PB-248 673/6SL.

<351>

AU ERMOLAEV K K. MIRONOV O G.
TI THE ROLE OF PHENOL DEGRADING MICROORGANISMS IN THE DESTRUCTION OF PHENOL IN THE BLACK SEA.
SO MICROBIOLOGY (ENGL TRANSL MIKROBIOLOGIYA). 44 (5). 1975 (1976) 839-842.
DE PSEUDOMONAS-DESMOLYTICUM

PSEUDOMONAS-DESMOLYTICUM-SSP-RATHONIS POLLUTED RIVER WATER.
AN B 76086008.

<352>
AU ETA, INC.
IN 600 ENTERPRISE DR. SUITE 214, OAK BROOK, IL 60521.
YR 76.
TI ECONOMIC IMPACT STUDY ON THE PROPOSED ILLINOIS REGULATION (R74-7) OF TOXIC SUBSTANCES.
SO ILLINOIS INSTITUTE FOR ENVIRONMENTAL QUALITY. IIEQ DOCUMENT 76/29, NOV. 1976. 66PP.
LG EN.
AB NONE.
ID ECONOMIC IMPACT, TOLUENE, SULFURIC ACID, HYDROCHLORIC ACID, TRICHLOMETHYLENE, METHYL ETHYL KETONE, METHANOL.
DE PUBLIC HEALTH, PUBLIC CONCERN, ACCIDENTS, COST-BENEFIT ANALYSIS, AMMONIA, CHLORINE, TOXIC MATERIALS, STATE REGULATIONS, ILLINOIS, ECONOMICS.
AN P 7702968.

<353>
AU EUR INL FISH ADVIS COMM WORK PARTY WATER QUAL CRITERIA.
YR 73.
TI REPORT ON CHLORINE AND FRESH WATER FISH.
SO EIFAC (EUR INLAND FISH ADVIS COMM) TECH PAP. 20. (RECD 1974) 1- 11.
DE PLANTS FISH RAINBOW TROUT BROWN TROUT DAPHNIA AVOIDANCE BEHAVIOR PHENOLS.
AN B 74061298.

<354>
AU EVANS W C.
IN DEPARTMENT OF BIOCHEMISTRY AND SOIL SCIENCE, UNIVERSITY COLLEGE OF NORTH WALES, BANGOR, GWYNEDD, UK.
YR 77.
TI BIOCHEMISTRY OF THE BACTERIAL CATABOLISM OF AROMATIC COMPOUNDS IN ANAEROBIC ENVIRONMENTS.
SO NATURE. 270. 5632. P17-22. 3 NOV 77.
LG EN.
MJ BACTERIA: ME.
MN ANAEROBIOSIS. FERMENTATION. RHODOSPIRILLACEAE: ME.
AN M 78051119. 7803.

<355>
AU EVSTIFEEV, M. M. AMINOVA, G. KH.
IN ROSTOV.-NA-DONU GOS. UNIV. ROSTOV-ON-DON, USSR.
YR 72.
TI OSCILLOPOLAROGRAPHIC DETERMINATION OF ALDEHYDES.
SO FIZ.-KHIM. METODY ANAL. KONTR. PROIZVOD. MATER. KONF. RAB. VUZOV (VYSSH. UCH. ZAVED.) ZAVOD. LAB. YUGO-VOSTOKA SSSR, 4TH. 1. P43-5. 1972.
LG RS.
AV BEZHAEV, M. S.
DE FORMALDEHYDE OSCILLOPOLAROG DETN. POLAROG OSCILLOG FORMALDEHYDE DETN . ALDEHYDE OSCILLOPOLAROG DETN. ACROLEIN OSCILLOPOLAROG DETN. WASTE WATER ANALYSIS ALDEHYDE.
AN C 08112072330.

<356>
AU EVSTIFEEV, M. M. AMINOVA, G. KH. KHIR'YANOVA, T. M.
IN USSR.
YR 71.
TI OSCILLOPOLAROGRAPHIC DETERMINATION OF SOME ALDEHYDES IN INDUSTRIAL WASTE WATERS.
SO METODY KHIM. ANAL. STOKOV VOD PREDPR. KHIM. PROM. P76-96. 1971.
LG RS.
AV DOROFEENKO, G. N.
DE FORMALDEHYDE DETN WASTE WATER. ACROLEIN DETN WASTE WATER. ALDEHYDE DETN WASTE WATER. WASTE WATER ANALYSIS ALDEHYDE.
AN C 07822140057.

<357>
AU EVSTIFEEV, M. M. AMINOVA, G. KH. PYSHCHEVA, L. L. SAVUSKAN, T. N. ORLOVA, O. M. TYAGUNOVA, T. A.
IN ROSTOV. GOS. UNIV. ROSTOV. USSR
YR 75.
TI MONITORING OF THE CONTAMINATION OF RESERVOIRS AND INDUSTRIAL EFFLUENTS BY SOME TOXIC ORGANIC SUBSTANCES WITH THE USE OF OSCILLOGRAPHIC POLAROGRAPHY.
SO IZV. SEV.-KAVK. NAUCHN. TSENTRA VYSSH. SHK. SER. TEKH. NAUK. 3. P23-5. 1975.
LG RS.
DE ORG COMPD POLLUTION POLAROG. OSCILLOG POLAROG POLLUTION MONITORING. PYRIDINE WASTEWATER POLAROG. BENZOPYRENE WASTEWATER POLAROG. MERCAPTOBENZOTHIAZOLE

WASTEWATER POLAROG.
AN C 08508051300.

<358>
AU EVSTIFEEV, M. M. GAVRILKO, YU. M. VASIL'EVA, G. S. STEBLETSOVA, V. D. CHIGARENKO, L. S.
IN USSR.
YR 72.
TI PHOTOMETRIC DETERMINATION OF ORGANIC COMPOUNDS IN INDUSTRIAL WASTE WATERS.
SO GIDROKHIM. ISSLED. P53-5. 1972.
LG RS.
DE BENZOTHIAZOLE DERIV DETN WATER. THIOBISBENZOTHIAZOLE DETN WATER. MERCAPTOBENZOTHIAZOLE DETN WATER. WATER ANALYSIS BENZOTHIAZOLE DERIV .
AN C 07824151188.

<359>
AU EVSYUKHIN, G. G. KULAKOV, V. N. MANZUROV, V. D. MANEVICH, L. E. FLID, R. M.
IN USSR.
YR 76.
TI EFFECT OF THE WATER CONCENTRATION AND A COBALT-BROMIDE COMPLEX ON THE INITIAL OXIDATION RATE OF DIMETHYLNAPHTHALENES.
SO ZH. FIZ. KHIM. 50. P223-5. 1976.
LG RS.
DE METHYLNAPHTHALENE OXIDN KINETICS CATALYST. NAPHTHALENE DIMETHYL OXIDN KINETICS CATALYST.
AN C 08423163876.

<360>
AU FAUST, S D. ALY, O M.
IN CAMPBELL SOUP CO. DEPT. OF ENVIRONMENTAL ENGINEERING, CAMPBELL PL. CAMDEN, NJ 08101.
YR 75.
TI THIN-LAYER CHROMATOGRAPHIC ANALYSIS IN WATER POLLUTION.
SO CHROMATOGRAPHIC ANALYSIS OF THE ENVIRONMENT. EDITED BY R. L. GRAB. NEW YORK: MARCEL DEKKER, 1975. PP. 515-564.
LG EN.
AB NONE.
ID PHENOLS, TLC, STEROLS.
DE WATER POLLUTION MEASUREMENTS, HYDROCARBONS, POLLUTANT DETECTION, PESTICIDE RESIDUES, ORGANIC COMPOUNDS, LIQUID CHROMATOGRAPHY, DETERGENTS, AMINO ACIDS.
AN P 7601250.

<361>
AU FAUST, S D. ALY, O M.
IN CAMPBELL SOUP CO. DEPT. OF ENVIRONMENTAL ENGINEERING, CAMPBELL PL. CAMDEN, NJ 08101.
YR 75.
TI PAPER CHROMATOGRAPHIC ANALYSIS IN WATER POLLUTION.
SO CHROMATOGRAPHIC ANALYSIS OF THE ENVIRONMENT. EDITED BY R. L. GRAB. NEW YORK: MARCEL DEKKER, 1975. PP. 489-513.
LG EN.
AB NONE.
ID PHENOLS, PAPER CHROMATOGRAPHY.
DE ACIDS, HYDROCARBONS, WATER POLLUTION MEASUREMENTS, PESTICIDE RESIDUES ORGANIC COMPOUNDS, LIQUID CHROMATOGRAPHY.
AN P 7601249.

<362>
AU FAUST, S D. ZOGORSKI, J S.
IN RUTGERS, THE STATE UNIV. COOK COLLEGE, DEPT. OF ENVIRONMENTAL SCIENCES, NEW BRUNSWICK, NJ 08903.
YR 74.
TI REMOVAL OF PHENOLS FROM POLLUTED WATERS.
SO RUTGERS UNIVERSITY, NEW BRUNSWICK, N.J. WATER RESOURCES RESEARCH INSTITUTE. RESEARCH PROJECT TECHNICAL COMPLETION REPORT A-033-N.J. JUNE 1974. 95 PP.
LG EN.
AB NONE.
ID PHENOLS.
DE ACTIVATED CARBON, ADSORPTION, AROMATIC COMPOUNDS, POLLUTANT REMOVAL, WATER POLLUTANTS.
AN P 7501600.

<363>
AU FAUST, SAMUEL D. STUTZ, HANSJAKOB. ALY, OSMAN M. ANDERSON, PETER W.
IN RUTGERS - THE STATE UNIV. NEW BRUNSWICK, N.J. WATER RESOURCES RESEARCH INST.
YR 71. 62P*.
TI RECOVERY, SEPARATION, AND IDENTIFICATION OF PHENOLIC COMPOUNDS FROM POLLUTED WATERS.
NT FINAL REPT.
PR PC$3.00 MF$0.95.
AB A FOUR-YEAR RESEARCH PROGRAM WAS COMPLETED WHEREIN THE RIVERS AND GROUND WATERS OF NEW JERSEY WERE SAMPLED AND TESTED FOR PHENOLIC COMPOUNDS. THESE CHEMICALS

ORIGINATE IN INDUSTRIAL MANUFACTURING PROCESSES AND ARE DISCHARGED INTO RIVERS AND GROUND WATERS THROUGH THE WASTE WATERS. SEVERAL SAMPLES WERE DRAWN FROM THE DEEP WELLS IN THE CAMDEN, NEW JERSEY, AREA. APPROXIMATELY 71% OF THE SAMPLES CONTAINED THESE PHENOLS IN QUANTITIES THAT EXCEEDED THE NEW JERSEY POTABLE WATER QUALITY STANDARD OF 1 PART PER BILLION. A CHEMICAL TEST WAS DISCOVERED FOR THE DETECTION AND IDENTIFICATION OF PHENOLS THAT ORIGINATE IN INDUSTRIAL WASTE WATERS. PHENOLS ARE A WATER POLLUTANT IN THAT THEY HAVE THE CHEMICAL PROPERTY OF IMPARTING TASTES AND ODOR TO DRINKING WATER. (AUTHOR).
MJ WATER-POLLUTION, PHENOLS, NEW-JERSEY, WATER-POLLUTION, COLORIMETRIC-ANALYSIS, PHENOLS.
MN WATER-QUALITY, GROUND-WATER, INDUSTRIAL-WASTES, RIVERS, SAMPLING.
ID ANTIPYRINE-AMINO.
AN N PB-198 030.

<364>

IN FEDERAL WATER QUALITY ADMINISTRATION, CHICAGO, ILL. GREAT LAKES REGION.
YR 69. 106P.
TI CHEMISTRY LABORATORY MANUAL BOTTOM SEDIMENTS.
PR PC$7.50/MF$0.95.
AB THE REPORT PRESENTS THE TECHNIQUES USED TO ANALYSE SEDIMENTS IN THE GREAT LAKES. STEP BY STEP PROCEDURES ARE GIVEN FOR THE ANALYSIS OF CHEMICAL OXYGEN DEMAND, CYANIDE, IRON, METALS, NITROGEN, OIL AND GREASE, OXYGEN DEMAND AND CHLORINE DEMAND, PESTICIDES, PHENOL, PHOSPHORUS, SOLIDS, SULFIDE, SILICA, MANGANESE, AND OXIDATION REDUCTION POTENTIALS.
MJ SEDIMENTS, CHEMICAL-ANALYSIS.
MN CYANIDES, IRON, TRACE-ELEMENTS, METALS, NITROGEN, OILS, PESTICIDES, PHENOLS, PHOSPHOUS, SOLIDS, INORGANIC-SULFIDES, MANGANESE.
ID CHEMICAL-OXYGEN-DEMAND, EPAL.
AN N PB-215 192.

<365>

AU FERRY J G. WOLFE R S.
IN DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF ILLINOIS, URBANA, ILLINOIS.
YR 76.
TI ANAEROBIC DEGRADATION OF BENZOATE TO METHANE BY A MICROBIAL CONSORTIUM.
SO ARCH MICROBIOL. 107. 1. P33-40. FEB 76.
LG EN.
MJ BACTERIA: ME.
MN ACETATES: ME. PD. HYDROXYBENZOIC-ACIDS: ME. SEWAGE.
AN M 76134915.

<366>

AU FICKE, HUNTER H.
IN DELAWARE UNIV. NEWARK. 107 800.
YR 73. 78P.
TI A DESIGN AND ECONOMIC EVALUATION OF CATALYTIC OXIDATION OF PHENOLS IN WASTEWATER.
NT RESEARCH REPT.
PR PC$7.25/MF$1.45.
AB CATALYTIC OXIDATION IS A POSSIBLE PROCESS FOR TREATING WASTEWATER EFFLUENTS CONTAINING PHENOL FROM CATALYTIC CRACKING UNITS AND COAL TAR PLANTS. EXPERIMENTAL DATA WERE COLLECTED TO DETERMINE INTRINSIC RATE CONSTANTS FOR PHENOL OXIDATION TO CO2 AND WATER. THESE CONSTANTS WERE USED IN THE DESIGN AND OPTIMIZATION OF A PROPOSED PROCESS. TOTAL COST FOR 99% REDUCTION OF PHENOL FROM 1000 GALLONS OF WASTEWATER (700 PPM) FROM THE CATALYTIC CRACKER WAS $0.35. TOTAL COST PER 1000 GALLONS (4000 PPM) FROM COAL TAR WAS $0.60.
MJ PHENOLS, INDUSTRIAL-WASTE-TREATMENT, WATER-POLLUTION-CONTROL.
MN OXIDATION, CHEMICAL-REACTIONS, DESIGN, CATALYTIC-CRACKING, COST-ANALYSIS, COAL-TAR, CHEMICAL-INDUSTRY.
ID CATALYTIC-OXIDATION, OWRR.
AN N PB-231 220/5.

<367>

AU FIGUEROA, LUIS O.
IN PHILLIPS PUERTO RICO CORE, INC. GUAYAMA, P. R.
YR 71.
TI WATER POLLUTION CONTROL AT PHILLIPS PUERTO RICO PETROCHEMICAL COMPLEX .
SO CHEM. ENG. PROGR. SYMP. SER. 67. P377-9. 1971.
LG EN.
DE PETROCHEM COMPLEX WASTE WATER. NYLON PRODN EFFLUENT. XYLENE PRODN WASTE WATER. CYCLOHEXANE PRODN WASTE WATER. BENZENE PRODN WASTE WATER .

TOLUENE PRODN WASTE WATER. MOTOR FUEL WASTE WATER.
AN C 07420102831.

<368>
AU FISHMAN M J. ERDMANN D E.
YR 75.
TI WATER ANALYSIS.
SO ANAL CHEM. 47 (5). 334R-361R.
DE POLLUTION ALKALI METALS HARDNESS ALKALINE EARTH METALS NITRATE NITRITE AMMONIA ORGANIC NITROGEN CYANIDE OXYGEN DETERGENTS PESTICIDES ORGANICS RADIOACTIVITY PH TURBIDITY ALUMINUM IRON SULFATE SULFIDE MANGANESE CHROMIUM COPPER LEAD ZINC CADMIUM NICKEL COBALT TIN MERCURY SILVER GOLD MOLYBDENUM VANADIUM BISMUTH URANIUM THORIUM RARE EARTHS BORON SELENIUM ARSENIC ANTIMONY PHOSPHORUS SILICA HALIDES.
AN B 76001787.

<369>
AU FISHMAN, G. I. PEVZNER, I. D. LYUTIKOVA, N. N.
IN USSR.
YR 72.
TI POTENTIOMETRIC ANALYSIS OF WASTE WATERS FROM POLYMER MANUFACTURING.
SO GIDROKHIM. ISSLED. P63-4. 1972.
LG RS.
DE WASTE WATER ANALYSIS POLYMER MANUF. UROTROPIN DETN WASTE WATER. FORMALDEHYDE DETN WASTE WATER. PHENOL DETN WASTE WATER. HYDROCHLORIC ACID DETN WASTE WATER. SODIUM CARBONATE DETN WASTE WATER.
AN C 07824151279.

<370>
AU FITI, MARIA.
IN INST. AT. PHYS. BUCHAREST. ROM.
YR 74.
TI RADIOLYTIC OXIDATION OF PHENOL IN AQUEOUS SOLUTION.
SO REV. ROUM. CHIM. 19. P1083-91. 1974.
LG EN.
DE OXIDN RADIOLYTIC AQ PHENOL.
AN C 08118113579.

<371>
AU FLECKINGER, R. STEVENIN, G. RIEUCAU, C.
IN SERV. VET. SEINE-MARIT. SOTTEVILLE-LES-ROUEN. FR.
YR 77.
TI MARINE HYDROCARBON POLLUTION. STUDY OF ITS CONSEQUENCES ON WILD MUSSELS (MYTILUS EDULIS) WITH RESPECT TO TIME ELAPSED SINCE THE POLLUTION.
SO BULL. ACAD. VET. FR. 50. P79-84. 1977.
LG FR.
DE WATER POLLUTION FUEL MUSSEL. BENZOPYRENE MUSSEL FUEL POLLUTION. HYDROCARBON MUSSEL FUEL POLLUTION.
AN C 08713096964.

<372>
AU FLEET, BERNARD. VON STORP, HENNING.
IN DEP. CHEM. IMP. COLL. LONDON. ENGL.
YR 71.
TI ANALYTICAL EVALUATION OF A CYANIDE-ION SELECTIVE MEMBRANE ELECTRODE UNDER FLOW-STREAM CONDITIONS.
SO ANAL. CHEM. 43. P1575-81. 1971.
LG EN.
DE CYANIDE SELECTIVE MEMBRANE ELECTRODE. ION SELECTIVE MEMBRANE ELECTRODE. SILVER SULFIDE IODIDE ELECTRODE. SULFIDE IODIDE SILVER ELECTRODE. IODIDE SULFIDE SILVER ELECTRODE.
AN C 07524147474.

<373>
AU FLEROV, B A. LUKYANENKO, V I.
YR 71.
TI THE ROLE OF ENVIRONMENTAL FACTORS IN RESISTANCE OF FISHES TO PHENOL.
SO NEWFOUNDLAND. MEMORIAL UNIVERSITY, ST. JOHNS. LIBRARY BULLETIN. 5(2): 17-18, MARCH 1971.
LG EN.
AB NONE.
ID SUMMARY ONLY, CARP.
DE PHENOL, FISHES, TOXICITY.
AN P 7006934.

<374>
AU FLEROV, B. A.
IN USSR.
YR 76.
TI HOW DO ANIMALS BEHAVE IN POLLUTED WATER.
SO KHIM. ZHIZN. P98-101. 1976.
LG RS.
DE WATER POLLUTION PESTICIDE LEECH. PHENOL TOXICITY LEECH. CHLOROPHOS TOXICITY LEECH. POLYCHLOROPINENE TOXICITY LEECH.
AN C 08619134358.

<375>
AU FLEROV, B. A.
IN USSR.
YR 73.
TI PHENOL INTOXICATION IN FISH.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P5-38. 1973.
LG RS.
DE REVIEW PHENOL TOXICITY FISH.
AN C 08015078848.

<376>
AU FLEROV, B. A.
IN INST. BIOL. INLAND WATERS. BOROK. USSR.
YR 71.
TI PROBLEMS OF HYDROBIONTS' ADAPTATION TO A TOXIC FACTOR.
SO GIDROBIOL. ZH. 7. P61-6. 1971.
LG RS.
DE ADAPTATION FISH TOXIN. PHENOL ADAPTATION FISH. POLYCHLOROPINENE ADAPTATION FISH. NATURAL SELECTION FISH TOXIN.
AN C 07623136525.

<377>
AU FLEROV, B. A.
IN INST. BIOL. VNUTR. VOD. BOROK. USSR.
YR 70.
TI CHRONIC PHENOL POISONING OF LEBISTES RETICULATUS.
SO VOP. VOD. TOKSIKOL. P163-8. 1970.
LG RS.
AV TOPACHEVSKII, A. V.
DE LEBISTES POISONING PHENOL. POISONING LEBISTES PHENOL. PHENOL POISONING LEBISTES. FISH POISONING PHENOL.
AN C 07417084577.

<378>
AU FLEROV, B. A.
IN USSR.
YR 69.
TI EFFECT OF SUBTOXIC CONCENTRATIONS OF PHENOL ON THE SEXUAL BEHAVIOR OF LEBISTES RETICULATUS.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 19. P66-9. 1969.
LG RS.
DE PHENOL SEX ACTIVITY FISH. SEX ACTIVITY PHENOL FISH. FISH SEX ACTIVITY PHENOL.
AN C 07221109684.

<379>
AU FOGELS A. SPRAGUE J B.
IN DEP. ZOOL. COLL. BIOL. SCI. UNIV. GUELPH, GUELPH, ONT. N1G 2W1, CAN.
YR 77.
TI COMPARATIVE SHORT-TERM TOLERANCE OF ZEBRAFISH FLAGFISH AND RAINBOW TROUT TO 5 POISONS INCLUDING POTENTIAL REFERENCE TOXICANTS.
SO WATER RES. 11 (9). 881-818.
LG EN.
DE BRACHYDANIO-RERIO JORDANELLA-FLORIDAE SALMO-GAIRDNERI CANADA COPPER SULFATE SODIUM PENTA CHLORO PHENATE PHENOL PICLORAM DODECYL SODIUM SULFATE.
AN B 65043077.

<380>
AU FOLMAR L. C.
YR 76.
TI OVERT AVOIDANCE REACTION OF RAINBOW TROUT FRY TO 9 HERBICIDES.
SO BULL ENVIRON CONTAM TOXICOL. 15 (5). 509-514.
DE SALMO-GAIRDNERI COPPER SULFATE DALAPON 2 4-D GLYPHOSATE AQUATHOL K DIQUAT ACROLEIN TRI CHLORO ACETIC-ACID EMULSIFIED XYLENE.
AN B 77055700.

<381>
AU FORRO, JOHN RICHARD.
IN THE PENNSYLVANIA STATE UNIVERSITY (0176) PH.D. 1965 068PP.
YR 65.
TI THE MICROBIAL OXIDATION OF TOLUENE.
SO DAI V26(11) P6305.
DE BACTERIOLOGY (0301).
AN D ADG66-04802.

<382>
AU FOUNTAINE, J. E. JOSHIPURA, P. B. KELIHER, P. N. JOHNSON, J. D.
IN CHEM. DEP. VILLANOVA UNIV. VILLANOVA. PA.
YR 74.
TI NEW ULTRAVIOLET RATIO SPECTROPHOTOMETRIC SYSTEM FOR THE DETERMINATION OF TRACE AMOUNTS OF PHENOLIC COMPOUNDS.
SO ANAL. CHEM. 46. P62-6. 1974.
LG EN.
DE UV PHENOL DETN APP. BATHOCHROMIC SHIFT PHENOL DETN APP. SPECTROPHOTOMETER PHENOL DETN APP. WATER ANALYSIS PHENOL.
AN C 08008043741.

<383>

AU FOX M E.
YR 76.
TI FATE OF SELECTED ORGANIC COMPOUNDS IN THE DISCHARGE OF KRAFT PAPER MILLS INTO LAKE SUPERIOR.
SO KEITH, LAWRENCE H. IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER. CONGRESS. MEXICO CITY, MEXICO, DEC. 1975. X+718P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40131-2. 641- 659.
DE CANADA USA FISH WATER POLLUTION GUAIACOL ALPHA TERPINEOL ACETOVANILLONE DEHYDRO ABIETIC-ACID SITO STEROL GAS CHROMATOGRAPHY MASS SPECTROMETRY.
AN B 77007312.

<384>

AU FRANT, M. S. ROSS, J. W. JR. RISEMAN, J. H.
IN ORION RES. INC. CAMBRIDGE. MASS.
YR 72.
TI ELECTRODE INDICATOR TECHNIQUE FOR MEASURING LOW LEVELS OF CYANIDE.
SO ANAL. CHEM. 44. P2227-30. 1972.
LG EN.
DE CYANIDE DETN. WASTE WATER ANALYSIS CYANIDE. SILVER ELECTRODE CYANIDE DETN.
AN C 07916096565.

<385>

AU FREED V H. HAQUE R.
YR 76.
TI CHEMICAL STRUCTURE AND PROPERTIES OF SELECTED BENZENE COMPOUNDS IN RELATION TO BIOLOGICAL ACTIVITY.
SO ENVIRON HEALTH PERSPECT. 13. 23- 26.
DE TOXICITY OCTANOL WATER COEFFICIENT VAPOR PRESSURE IR ABSORPTION PI VALUES PHYSICOCHEMICAL CONSTANTS SPATIAL ORIENTATION MOLECULAR ORBITALS VIBRATIONAL ROTATIONAL FREQUENCIES.
AN B 77008144.

<386>

AU FRIES L.
YR 74.
TI GROWTH STIMULATION OF AXENIC RED ALGAE BY SIMPLE PHENOLIC COMPOUNDS.
SO J EXP MAR BIOL ECOL. 15 (1). 1-9.
DE GONIOTRICHUM-ALSIDII POLYSIPHONIA-URCEOLATA P HYDROXY BENZALDEHYDE VANILLIN SYRINGALDEHYDE VERATRALDEHYDE BROMO PHENOLS CAFFEIC- ACID FERULIC-ACID ALPHA TOCOPHEROL UBI QUINONE VITAMIN K PLASTO QUINONE P HYDROXYPHENYL PYRUVIC-ACID CATECHOLS.
AN B 58068907.

<387>

AU FROLOV, L. F. OZEROV, A. I. VOINOV, S. A. LUTSENKO, T. A. SHEVCHENKO, V. N.
IN USSR.
YR 73.
TI AUTOMATIC ANALYZER FOR CYANIDES IN WASTE WATER.
SO TR. N.-I. I PROEKT. IN-T PO OBOGASHCH. RUD TSVET. MET. KAZMEKHANOBR. P112-16. 1973.
LG RS.
DE FLOTATION WASTE WATER CYANIDE.
AN C 08324196548.

<388>

AU FROMM, P. O. OLSON, K. R.
IN MICHIGAN STATE UNIV. EAST LANSING. DEPT. OF PHYSIOLOGY. WATER RESEARCH AND TECHNOLOGY, WASHINGTON, D.C.
YR 73. 24P.
TI INDUSTRIAL AND MUNICIPAL WASTES: ACTION OF SOME WATER SOLUBLE POLLUTANTS ON FISH.
NT RESEARCH TECHNICAL PROJECT COMPLETION REPT. 1 SEP 72-30 SEP 73.
PR PC$3.25/MF$2.25.
AB THE PURPOSE WAS TO OBSERVE SOME OF THE MORE SUBTLE EFFECTS OF POLLUTANTS ON THE GILL BLOOD-WATER BARRIER USING GILL EPITHELIA AS THE TARGET ORGAN. ELECTRON MICROSCOPIC TECHNIQUES, INCLUDING SCANNING ELECTRON MICROSCOPY (SEM), TRANSMISSION ELECTRON MICROSCOPY (TEM) AND ELECTRON MICROPROBE ANALYSIS WERE USED TO STUDY CHANGES IN GILL ULTRASTRUCTURE AND ION DISTRIBUTION IN GILLS FOLLOWING EXPOSURE OF RAINBOW TROUT TO DIFFERENT WATER SOLUBLE POLLUTANTS. TWO OF THESE TECHNIQUES, SCANNING ELECTRON MICROSCOPY AND ELECTRON MICROPROBE ANALYSIS HAVE NEVER BEFORE BEEN APPLIED TO GILL ULTRASTRUCTURE ANALYSIS. THE REPORT CONSISTS OF THREE SEPARATE ARTICLES: A SCANNING ELECTRON MICROSCOPIC STUDY OF SECONDARY LAMELLAE AND CHLORIDE CELLS OF RAINBOW TROUT (SALMO GAIRDNERI); MERCURY UPTAKE AND ION DISTRIBUTION IN GILLS OF

RAINBOW TROUT; TISSUE SCANS WITH AN ELECTRON MICROPROBE; EFFECTS OF MERCURY EXPOSURE ON RAINBOW TROUT GILL ULTRASTRUCTURE.

MJ FISHES, WATER-POLLUTION.

MN ELECTRON-MICROSCOPY, EXPOSURES, MERCURY-INORGANIC-COMPOUNDS, INDUSTRIAL-WASTES, IONS, TISSUES-BIOLOGY, DETERGENTS, ABSORPTION, FORMALDEHYDE, DDT, MORPHOLOGY, TOXICOLOGY.

ID WATER-POLLUTION-EFFECTS-ANIMALS, SALMO-GAIRDNERI, RAINBOW-TROUT, GILLS-FISHES, NTISDIOWRT.

AN N PB-237 428/8SL.

<389>

AU FRUCHTER, J. S. PETERSEN, M. R. LAUL, J. C. RYAN, P. W.

IN BATTELLE PACIFIC NORTHWEST LABS. RICHLAND, WASH. AND DEVELOPMENT ADMINISTRATION. 9500022.

YR 76. 31P.

TI HIGH PRECISION TRACE ELEMENT AND ORGANIC CONSTITUENT ANALYSIS OF OIL SHALE AND SOLVENT-REFINED COAL MATERIALS.

NT 173. NATIONAL MEETING OF THE AMERICAN CHEMICAL SOCIETY, NEW ORLEANS, LOUISIANA, UNITED STATES OF AMERICA (USA), 20 MAR 1977.

PR PC A03/MF A01.

AB THE APPLICATION OF A NUMBER OF SENSITIVE AND PRECISE METHODS FOR THE DETERMINATION OF TRACE ELEMENTS, HEAVY ELEMENT SPECIES AND ORGANIC COMPOUNDS IN MATERIALS FROM AN OIL SHALE RESEARCH RETORT PROCESS AND FROM A SOLVENT-REFINED COAL PILOT PLANT OPERATION ARE DISCUSSED. THE METHODS WERE CHOSEN BOTH FOR THEIR SENSITIVITY, AND ALSO FOR THEIR RELATIVE FREEDOM FROM INTERFERENCE EFFECTS. COAL LIQUIDS CONTAIN MUCH HIGHER CONCENTRATIONS OF AROMATIC COMPOUNDS, INCLUDING POLYNUCLEAR AROMATIC HYDROCARBONS (PNA'S). A LARGER RELATIVE FRACTION OF THE PNA'S IN SHALE OIL ARE ALKYL SUBSTITUTED. COAL LIQUIDS ARE ALSO CONSIDERABLY HIGHER IN PHENOLS (28 PERCENT) THAN IS SHALE OIL (2 PERCENT). N-HETEROCYCLICS ARE PRESENT IN HIGHER CONCENTRATION (GREATER THAN 8 PERCENT) IN SHALE OIL DUE TO THE HIGH NITROGEN CONTENT OF THE RAW SHALE. HYDROAROMATICS ARE COMMON IN COAL LIQUIDS BUT NEGLIGIBLE IN SHALE OIL. INORGANIC ELEMENTS AND SPECIATION MEASUREMENTS INDICATE SIGNIFICANT AMOUNTS OF THE TOXIC HEAVY ELEMENTS HG, AS, ZN, AND SE IN EFFLUENT OIL WATER AND GAS STREAMS. IN ADDITION, THE PROCESS WATER CONTAINS SIGNIFICANT CO, BR, SB, AND U. RAW OIL SHALE IS HIGHLY ENRICHED IN SE, AS AND SB AND SOMEWHAT ENRICHED IN U, PB, CS, HG AND ZN. SOLVENT-REFINED COAL LIQUIDS WERE FOUND TO BE RELATIVELY LOW IN MOST TRACE ELEMENTS. THE MAJORITY OF TRACE ELEMENTS ARE CONCENTRATED BY THE PROCESS INTO THE MINERAL RESIDUE. ONLY BR AND HG ARE NOT DEPLETED IN SOLVENT-REFINED COAL. OTHER TRACE ELEMENTS STILL REMAINING IN SIGNIFICANT AMOUNTS ARE U, TA, CR, AND ZN. (ERA CITATION 02: 033795).

MJ SHALE-OIL, SOLVENT-REFINED-COAL, TRACE-AMOUNTS.

MN ABSORPTION-SPECTROSCOPY, ACTIVATION-ANALYSIS, ANTIMONY, AROMATICS, ARSENIC, BROMINE, CHEMICAL-COMPOSITION, CHROMIUM, COBALT, ELEMENTS, EMISSION-SPECTROSCOPY, GAS-CHROMATOGRAPHY, GASEOUS-WASTES, MERCURY, OIL-SHALES, SAMPLING, SELENIUM, SEPARATION-PROCESSES, URANIUM, WASTE-WATER, X-RAY-FLUORESCENCE-ANALYSIS, ZINC.

ID ERDA-040500, ERDA-010600, CHEMICAL-ANALYSIS, COAL-LIQUIDS, CONCENTRATION-COMPOSITION, COAL-LIQUIDS, NTISERDA.

AN N BNWL-SA-6001.

<390>

AU FULLER, FREDERIC D.

IN FEDERAL WATER QUALITY ADMINISTRATION, CHICAGO, ILL. GREAT LAKES REGION.

YR 69. 106P.

TI CHEMISTRY LABORATORY MANUAL, BOTTOM SEDIMENTS COMPILED BY GREAT LAKES REGION COMMITTEE ON ANALYTICAL METHODS.

PR PC$7.25/MF$0.95.

AB CONTENTS: INTRODUCTION; CHEMICAL OXYGEN DEMAND; CYANIDE; IRON; METALS; NITROGEN; OIL AND GREASE; OXYGEN DEMAND AND CHLORINE DEMAND; PESTICIDES; PHENOL; PHOSPHORUS; SOLIDS; SULFIDE; SILICA; MANGANESE; OXIDATION-REDUCTION POTENTIAL MEASUREMENTS.

MJ SEDIMENTS, CHEMICAL-ANALYSIS.

MN MANUALS.

ID WATER-POLLUTION-DETECTION, EPAL.

AN N PB-217 451.

<391>

AU FUNASAKA, RYOZO. OSE, YOUKI. SATO, TAKAHIKO.
IN GIFU COLL. PHARM. GIFU. JAPAN.
YR 76.
TI STUDIES ON THE OFFENSIVE-ODOR FISH OF THE NAGARA RIVER. VII. MEDIAN TOLERANCE LIMIT TEST OF THE OFFENSIVE-ODOR SUBSTANCES.
SO EISEI KAGAKU. 22. P20-3. 1976.
LG JA.
DE FATTY ACID TOXICITY CARP. PHENOL TOXOCITY CARP.
AN C 08501001009.

<392>

AU FUNASAKA, RYOZO. OSE, YOUKI. SATO, TAKAHIKO.
IN GIFU COLL. PHARM. GIFU. JAPAN.
YR 75.
TI OFFENSIVE ODOR OF FISH FROM THE NAGARA RIVER. IV. PHENOL AS ONE OF THE OFFENSIVE-ODOR SUBSTANCES.
SO EISEI KAGAKU. 21. P101-5. 1975.
LG JA.
DE PHENOL FISH TISSUE ODOR. WATER POLLUTION PHENOL FISH.
AN C 08321173357.

<393>

AU FUNASAKA, RYOZO. TANAKA, KAZUO. ITAGAKI, YASUHIRO. OSE, YOUKI. SATO, TAKAHIKO.
IN GIFU COLL. PHARM. GIFU. JAPAN.
YR 75.
TI STUDIES ON THE OFFENSIVE-ODOR FISH OF THE NAGARA RIVER. V. IDENTIFICATION OF OFFENSIVE-ODOR SUBSTANCES BY HIGH-RESOLUTION GAS CHROMATOGRAPHY-MASS SPECTROMETRY.
SO EISEI KAGAKU. 21. P341-7. 1975.
LG JA.
DE FATTY ACID ODOR FISH. AROM HYDROCARBON ODOR FISH. PHENOL ODOR FISH.
AN C 08501002757.

<394>

AU FURUKI, MASAKAZU. MORIGUCHI, YUZO. KITAMURA, HIROYUKI.
IN ENVIRON. SCI. INST. HYOGO PREFECT. KOBE. JAPAN.
YR 76.
TI STUDIES ON THE BIOLOGICAL TREATMENT OF WASTE WATER CONTAINING CYANIDES. V. ADAPTATION PROCESS IN THE ACTIVATED SLUDGE TREATMENT OF WASTE WATER CONTAINING CYANIDES.
SO HAKKO KOGAKU ZASSHI. 54. P649- 58. 1976.
LG JA.
DE CYANIDE WASTEWATER ACTIVATED SLUDGE ADAPTATION. RICE BRAN CYANIDE ACTIVATED SLUDGE. ENZYME CYANIDE DEGRADING.
AN C 08606033857.

<395>

AU GABOVICH R D. VROCHINSKII K K. KURINNYI I L.
YR 69.
TI THE CLARIFICATION, DEODORIZATION AND DECONTAMINATION OF DRINKING WATER WITH OZONE.
TR OBESTSVECHIVANIE, DEZODORATSIIA I OBEZVREZHIVANIE PIT'EVOI BODY OZONOM.
SO GIG SANIT. 34. 6. P18-22. JUN 69.
LG RS.
MJ OZONE.
MN CARCINOGENS. OXIDATION-REDUCTION.
AN M 69290324.

<396>

AU GABOVICH, R. D. KURENNOY, I. L.
IN ARMY MEDICAL INTELLIGENCE AND INFORMATION AGENCY WASHINGTON D C. 409112.
YR 74. 9P.
TI OZONIZATION OF WATER CONTAINING HUMIC COMPOUNDS, PHENOLS, AND PESTICIDES (OZONIROVANIYE VODY, SODERZHASHCHEY GUMINOVYYE SOYEDINENIYA, FENOLY I PESTITSIDY).
NT TRANS. OF VOPROSY KOMMUNALNOY GIGIYENY (USSR) N6 P11-19 1966.
PR PC A02/MF A01.
AB THE PURPOSE OF THIS WORK WAS TO: (1) STUDY THE QUANTITATIVE CONDITIONS AFFECTING THE USE OF OZONE TO BREAK DOWN ADMIXTURES OF HUMIC SUBSTANCES AND DECOLORIZE WATER; (2) STUDY QUANTITATIVELY THE USE OF OZONE TO BREAK DOWN PHENOLS AND SOME PESTICIDES IN SOLUTIONS PREPARED FROM DISTILLED WATER AND WATER CONTAINING HUMIC COMPOUNDS. IN SOME CASES THE EFFECT OF OZONE AND CHLORINE WERE COMPARED. A LABORATORY OZONIZING APPARATUS IN WHICH THE EXPERIMENTAL CONDITIONS WERE SIMILAR TO THOSE OCCURRING NATURALLY WAS USED. CONCLUSIONS: (1) OZONIZATION OF WATER BREAKS DOWN HUMIC SUBSTANCES OF NATURAL ORIGIN THAT IMPART COLOR TO IT. THE AMOUNT OF OZONE CONSUMED IN DECOLORIZING

WATER UNDER THE WORST CONDITIONS IS 0.15 TO 0.2 MILLIGRAM PER LITER-DEGREE OF CHROMATICITY. (2) TO DEPHONOLIZE WATER REQUIRES 0.75 TO 2.5 MILLIGRAMS OF OZONE PER MILLIGRAM OF PHENOL, DEPENDING ON THE THOROUGHNESS OF PURIFICATION. OZONIZATION AND CHLORINATION OF WATER ARE EFFECTIVE MEANS OF DEODORIZING WATER CONTAINING THE PESTICIDES UNDER STUDY. TO DEODORIZE WATER CONTAINING ONLY TOXIC CHEMICALS, IT IS BEST TO USE OZONE IN SOME CASES AND CHLORINE IN OTHERS. THE HUMIC COMPOUNDS PRESENT IN NATURAL WATERS DO NOT PREVENT DEODORIZATION, BUT THEY REQUIRE SOMEWHAT LARGER AMOUNTS OF OZONE BECAUSE THE WATER IS DECOLORIZED AT THE SAME TIME THAT THE PESTICIDES ARE BEING BROKEN DOWN. THUS, OZONIZATION AND CHLORINATION CAN BE USED TO DISINFECT SEWAGE CONTAINING A SUBSTANTIAL QUANTITY OF PESTICIDES. THE SAME METHODS OF TREATMENT CAN FREE WATER REACHING THE WATER SUPPLY SYSTEM FROM RESIDUAL AMOUNTS OF PESTICIDES.

MJ OZONE, OZONATION, WATER- TREATMENT, PESTICIDES.

MN CHLORINATION, COLORING, PHENOLS, ODORS, PURIFICATION, WATER-POLLUTION, USSR, TRANSLATIONS.

ID ODOR-CONTROL, WATER-POLLUTION-CONTROL, SEWAGE-TREATMENT, POTABLE-WATER, NTISDODXA.

AN N AD-A038 406/5SL.

<397>

AU GABOVICH, R. D. KURINNOY, I. L.

IN ARMY MEDICAL INTELLIGENCE AND INFORMATION AGENCY WASHINGTON D C. 409112.

YR 74. 6P.

TI OZONIZATION OF WATER CONTAINING PETROLEUM PRODUCTS, AROMATIC HYDROCARBONS, NITRO COMPOUNDS, AND ORGANOCHLORINE PESTICIDES (OZONIROVANIYE VODY, SODERZHASHCHEY NEFTEPRODUKTY, AROMATICHESKIYE UGLEVODORODY, NITROSOYSEDINENIYA I KHLORORGANICHESKIYE PESTITSIDY).

NT TRANS. OF VOPROSY GIGIYENY NASELENNYKH MEST (USSR) P31-35 1967.

PR PC A02/MF A01.

AB OZONIZATION OF WATER BREAKS DOWN ADMIXTURES OF PETROLEUM PRODUCTS (PETROLEUM, GASOLINE). THE AMOUNT OF OZONE REQUIRED DEPENDS ON THE THOROUGHNESS OF PURIFICATION. ABOUT 0.5 MILLIGRAM OF OZONE PER MILLIGRAM OF PETROLEUM IS REQUIRED TO PURIFY THE WATER (TO REDUCE THE PETROLEUM TO 0.2 TO 0.3 MILLIGRAM/LITER). FROM 0.025 TO 1 MILLIGRAM OF OZONE PER MILLIGRAM OF GASOLINE IS REQUIRED TO RID THE WATER OF GASOLINE (WITH 1 AND 0.03 MILLIGRAM/LITER OF RESIDUAL GASOLINE, RESPECTIVELY). AROMATIC HYDROCARBONS (BENZENE, DIETHYL BENZENE) AND NITRO COMPOUNDS ARE ALSO BROKEN DOWN BY OZONE. CHLORINATION EVEN WITH LARGE QUANTITIES OF CHLORINE (40 MILLIGRAMS/LITER) IS NOT AN EFFECTIVE MEANS OF ELIMINATING AROMATIC HYDROCARBONS AND NITRO COMPOUNDS. DDT IS HIGHLY RESISTANT TO OZONE AND ONLY LARGE QUANTITIES OF THE LATTER (ABOUT 50 MILLIGRAMS PER MILLIGRAM OF DDT) CAN REDUCE THE DDT CONCENTRATION IN WATER TO THE MAXIMUM PERMISSIBLE LEVEL (0.1 TO 0.2 MILLIGRAM/LITER). CHLORINATION OF WATER DOES NOT BREAK DOWN DDT. THE STUDIES PUBLISHED IN THE FIRST AND SECOND ARTICLES SHOW THAT OZONIZATION OF DRINKING WATER AND SEWAGE MAY RESULT IN THE BREAKDOWN OF A NUMBER OF ORGANIC ADMIXTURES POSSESSING TOXIC ACTION OR IMPAIRING THE ORGANOLEPTIC PROPERTIES OF WATER. CHLORINATION EVEN WITH LARGE QUANTITIES OF CHLORINE (HYPERCHLORINATION) IS NOT AS EFFECTIVE IN THIS RESPECT AS OZONIZATION.

MJ OZONE, OZONATION, WATER- TREATMENT, DRINKING-WATER, PETROLEUM-PRODUCTS, SEWAGE-TREATMENT.

MN CHLORINATION, CHLORINE, GASOLINE, BENZENE-COMPOUNDS, AROMATIC-HYDROCARBONS, PHENOLS, NITRATES, DDT, CONCENTRATION-CHEMISTRY, WATER-POLLUTION, USSR, TRANSLATIONS.

ID POTABLE-WATER, WATER-POLLUTION-CONTROL, PESTICIDES, NTISDODXA.

AN N AD-A038 404/0SL.

<398>

AU GABOVICH, R. D. KURINNYY, I. L. FEDORENKO, Z. P.

IN ARMY MEDICAL INTELLIGENCE AND INFORMATION AGENCY WASHINGTON D C. 409112.

YR 74. 5P.

TI EFFECT OF OZONE AND CHLORINE ON 3,4-BENZOPYRENE DURING THE

DISINFECTION OF WATER (DEYSTVIYE OZONA I KHLORA NA 3,4-BENZPIREN PRI OBEZZARAZHIVANII VODY).

NT TRANS. OF GIG. NASELENNYKH MEST (USSR) N8 P88-91 1969.

PR PC A02/MF A01.

AB Z.P. FEDORENKO'S EXPERIMENTS SHOWED THAT THE TARRY SUBSTANCES ISOLATED FROM SEWAGE POSSESS CARCINOGENIC ACTIVITY WHEN APPLIED TO THE SKIN AND THAT PERORAL ADMINISTRATION TO WHITE RATS OF WATER CONTAINING VARIOUS CONCENTRATIONS OF 3-4-BENZOPYRENE INDUCES MALIGNANT AND BENIGN TUMORS OF THE FORESTOMACH. THE FREQUENCY OF TUMOR DEVELOPMENT WAS FOUND TO BE DIRECTLY RELATED TO THE AMOUNT OF THE SUBSTANCE ADMINISTERED. IN THE LIGHT OF THE FOREGOING, IT SEEMED WORTHWHILE TO TRACE THE FATE OF 3-4-BENZOPYRENE DISSOLVED IN WATER AND SUBJECTED TO DIFFERENT KINDS OF TREATMENT IN DRINKING WATER SUPPLY SYSTEMS. THE SUBJECT IS INADEQUATELY DISCUSSED IN THE LITERATURE. THERE ARE ONLY A FEW REPORTS ON THE EFFECT OF CHLORINATION OF WATER ON 3-4-BENZOPYRENE DISSOLVED IN IT. BECAUSE OF THE LIMITED INFORMATION ON THE SUBJECT, WE DECIDED TO COMPARE THE EFFECT OF CHLORINE TO THAT OF THE MOST INTENSIVE OXIDIZING AGENT, OZONE, ON 3-4-BENZOPYRENE DISSOLVED IN WATER.

MJ CARCINOGENS, WATER-TREATMENT, CANCER.

MN WATER-POLLUTION, OZONE, CHLORINE, EFFLUENTS, COAL, SHALE, OIL-PRODUCTS, PETROLEUM-PRODUCTS, REFINERIES, OPEN-WATER, RATS, TRANSLATIONS, USSR.

ID BENZOPYRENE, WATER-POLLUTION-CONTROL, INDUSTRIAL-WASTES, SEWAGE-TREATMENT, LABORATORY-ANIMALS, MALIGNANT-NEOPLASMS, NEOPLASMS, STOMACH, POTABLE-WATER, WATER-POLLUTION-EFFECTS-ANIMALS, NTISDODXA.

AN N AD-A038 408/1SL.

<399>

AU GALLO M A. OSER B L. COX G E. BAILEY D E.

YR 77.

TI STUDIES ON THE LONG-TERM TOXICITY OF 2 BUTANOL.

SO TOXICOL APPL PHARMACOL. 41 (1). 135.

DE ABSTRACT RAT REPRODUCTION STUDY ISO PROPANOL WEANLING GROWTH DEPRESSION RETARDED SKELETAL MATURATION STRESS LESION FAT EXTRACTANT FISH PROTEIN CONCENTRATE.

AN B 78034721.

<400>

AU GARRETT, BENJAMIN CAYWOOD.

IN EMORY UNIVERSITY (0665) PH.D. 1975, 075PP.

YR 75.

TI REINVESTIGATION OF PHENOL OXIDASE ACTIVITY BY IMPROVED ANALYTICAL TECHNIQUES.

SO DAI V36(07), SEC B, P3340.

DE CHEMISTRY, ANALYTICAL (0486).

AN D ADG76-01617.

<401>

AU GARRISON, ARTHUR W. HILL, DAVID W.

IN SOUTHEAST WATER LAB. ENVIRON. PROT. AGENCY. ATHENS. GA.

YR 72.

TI ORGANIC POLLUTANTS FROM MILL PERSIST IN DOWNSTREAM WATERS.

SO AMER. DYEST. REP. 61. P21, 24-5. 1972.

LG EN.

DE TEXTILE WASTE WATER LAGOONING. ORG POLLUTANT TEXTILE WASTE WATER. DIELDRIN TEXTILE WASTE WATER. ACETOPHENONE TEXTILE WASTE WATER. DYE TEXTILE WASTE WATER. NONYLPHENOL TEXTILE WASTE WATER.

AN C 07622131212.

<402>

AU GARRISON, RICHARD L. MAUK, CHARLES E. PRENGLE, H. WILLIAM JR.

IN HOUSTON RESEARCH INC TEX. 407091.

YR 74. 112P*.

TI CYANIDE DISPOSAL BY OZONE OXIDATION.

NT FINAL REPT. APR 72-NOV 73.

AV 1.

PR PC$4.50/MF$1.45.

AB AQUEOUS CYANIDE AND COMPLEXED METAL CYANIDE WASTES FROM THE AIR FORCE'S ROUTINE ELECTROPLATING OPERATIONS AND COLOR PHOTOGRAPHIC FILM PROCESSING REQUIRE EXTENSIVE TREATMENT TO SATISFY STRINGENT WATER QUALITY STANDARDS. A PROCESS WAS DEVELOPED BY LABORATORY EXPERIMENTATION USING OZONE FOR THE TOTAL DESTRUCTION OF CYANIDE AND METAL CYANIDE COMPLEXES. MASS TRANSFER AND KINETIC RATE CONSTANTS WERE DETERMINED BY EXPERIMENTATION.

A PILOT SCALE PROTOTYPE WAS DESIGNED, FABRICATED, AND OPERATED TO DESTROY ACTUAL AIR FORCE CYANIDE WASTES. IN ALL CASES, CYANIDE CONCENTRATION IN THE EFFLUENT WAS REDUCED TO BELOW THE DETECTABLE LIMIT. A CONCEPTUAL DESIGN OF A FULL SCALE SYSTEM TO TREAT ELECTROPLATING WASTE IS INCLUDED. (MODIFIED AUTHOR ABSTRACT).
MJ CYANIDES.
MN METAL-COMPLEXES, OXIDATION, OZONE, WATER-POLLUTION, ELECTROPLATING, COLOR-FILM, PHOTOGRAPHIC-PROCESSING-EQUIPMENT, WASTE-TREATMENT, MASS-TRANSFER, REACTION-KINETICS, PROTOTYPES, FABRICATION.
ID WATER-POLLUTION-CONTROL, INDUSTRIAL-WASTE-TREATMENT, CHEMICAL-REMOVAL-WATER-TREATMENT, WATER-POLLUTION-CONTROL-EQUIPMENT, AF.
AN N AD-775 152/2.

<403>

AU GAVRILOVA, L. I.
IN USSR.
YR 75.
TI EFFECT OF RESORCINOL ON THE CHEMICAL PROPERTIES OF WATER AND BIOCHEMICAL PROCESSES OCCURRING IN A RESERVOIR.
SO TR. SARATOV. OTD. NII OZ. I RECH. RYB. KH-VA. P111-15. 1975.
LG RS.
DE RESORCINOL WATER POLLUTION.
AN C 08520148783.

<404>

AU GAVRILOVA, L. I.
IN USSR.
YR 75.
TI EFFECT OF ANILINE AND ANILINE HYDROCHLORIDE ON THE CHEMICAL PROPERTIES OF WATER AND BIOCHEMICAL PROCESSES OCCURRING IN A RESERVOIR.
SO TR. SARATOV. OTD. NII OZ. I RECH. RYB. KH-VA. P97-102. 1975.
LG RS.
DE ANILINE WATER POLLUTION.
AN C 08520148782.

<405>

AU GELEVTSEV, A. N. MAKSIMENKO, YU. L.
IN USSR.
YR 76.
TI STUDY OF OXIDATION OF CYANIDES AND PHENOLS IN NATURAL AND WASTE WATERS WITH CHLORINE DIOXIDE.
SO SOV.-AMER. SIMPOZ. PO FIZ.-KHIM. OCHISTKE STOCHN. VOD, MINNESOTA, SSHA, 1975. P76-92. 1976.
LG RS.
DE CHLORINE DIOXIDE CYANIDE OXIDN. PHENOL OXIDN CHLORINE DIOXIDE. EFFLUENT OXIDN CHLORINE DIOXIDE.
AN C 08618126731.

<406>

AU GERDES, WILLIAM HERMAN.
IN RUTGERS UNIVERSITY THE STATE U. OF NEW JERSEY (NEW BRUNSWICK) (0190) PH.D. 1962 109PP.
YR 62.
TI PART ONE: ANALYSIS OF BRASS BY ANION-EXCHANGE CHROMATOGRAPHY. PART TWO: SORPTION OF PHENOL BY LOW-CAPACITY ION-EXCHANGE RESINS.
SO DAI V23(01) P0048.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG62-02598.

<407>

AU GERMAIN J E. PATTERSON K E.
YR 74.
TI PLATING AND CYANIDE WASTES.
SO J WATER POLLUT CONTROL FED. 46 (6). 1301-1315.
DE REVIEW INDUSTRY WATER POLLUTION TREATMENT RE CYCLING RECOVERY MEMBRANE EXCHANGE NEUTRALIZATION PRECIPITATION ADSORPTION EFFLUENT SAMPLING ANALYSIS PATENTS.
AN B 75068800.

<408>

AU GHOSH S. CONRAD J R. KLASS D L.
YR 75.
TI ANAEROBIC ACIDOGENESIS OF WASTE WATER SLUDGE.
SO J WATER POLLUT CONTROL FED. 47 (1). 30-45.
DE MICROORGANISMS ACTIVATED SLUDGE 2 PHASE DIGESTION SYSTEM SOLIDS STABILIZATION METHANE PRODUCTION ACID FORMATION.
AN B 59052116.

<409>

AU GIBSON D T.
IN DEPARTMENT OF MICROBIOLOGY, THE UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN, TEXAS.
YR 76.
TI INITIAL REACTIONS IN THE BACTERIAL

DEGRADATION OF AROMATIC HYDROCARBONS.
SO ZENTRALBL BAKTERIOL ORIG B. 162. 1-2. P157-68. JUL 76.
LG EN.
MJ BACTERIA: ME.
MN ALCOHOL-OXIDOREDUCTASES: ME. ME. BIODEGRADATION. ME. EN, ME. (NIH-SUP).
AN M 77061959. 7703.

<410>

AU GIBSON D T. KOCH J R. SCHULD C L. KALLIO R E.
YR 68.
TI OXIDATIVE DEGRADATION OF AROMATIC HYDROCARBONS BY MICROORGANISMS. II. METABOLISM OF HALOGENATED AROMATIC HYDROCARBONS.
SO BIOCHEMISTRY. 7. 11. P3795-802. NOV 68.
LG EN.
MJ BENZENE-DERIVATIVES: ME. ME.
MN BROMINE. MODELS-BIOLOGICAL. SPECTROPHOTOMETRY.
AN M 69051114.

<411>

AU GIBSON D T. MAHADEVAN V. DAVEY J F.
YR 74.
TI BACTERIAL METABOLISM OF PARA- AND META-XYLENE: OXIDATION OF THE AROMATIC RING.
SO J BACTERIOL. 119. 3. P930-6. SEP 74.
LG EN.
MJ PSEUDOMONAS: ME.
MN SUCCINATES: ME. SPECTROPHOTOMETRY. CHROMATOGRAPHY- THIN-LAYER. METHYLATION.
AN M 74298648.

<412>

AU GIBSON, D. T. GSCHWENDT, BRIGITTE. YEH, W. K. KOBAL, V. M.
IN DEP. MICROBIOL. UNIV. TEXAS. AUSTIN. TEX.
YR 73.
TI INITIAL REACTIONS IN THE OXIDATION OF ETHYLBENZENE BY PSEUDOMONAS PUTIDA.
SO BIOCHEMISTRY. 12. P1520-8. 1973.
LG EN.
DE ETHYLBENZENE OXIDN PSEUDOMONAS.
AN C 07905027793.

<413>

AU GIBSON, D. T. YEH, W. K.
IN TEXAS UNIV. AUSTIN. DEPT. OF MICROBIOLOGY.
YR 73. 7P.
TI MICROBIAL DEGRADATION OF AROMATIC HYDROCARBONS.
AV INCLUDED IN THE MICROBIAL DEGRADATION OF OIL POLLUTANTS, P33-38 1973, COM-74-11013.
PR (ORDER AS COM-74-11013).
AB BACTERIA CAPABLE OF GROWTH ON BENZENE, TOLUENE, ETHYLBENZENE, NAPHTHALENE AND BIPHENYL WERE ISOLATED FROM SOIL. MUTAGENESIS LED TO THE ISOLATION OF DIFFERENT BACTERIAL STRAINS THAT WILL ACCUMULATE THE INITIAL PRODUCTS OF HYDROCARBON OXIDATION. THE RESULTS OBTAINED SUGGEST THAT CIS-HYDROXYLATION IS A COMMON REACTION IN THE MICROBIAL OXIDATION OF AROMATIC HYDROCARBONS. DIFFERENCES IN MECHANISMS UTILIZED BY BACTERIA AND MAMMALS TO OXIDIZE AROMATIC HYDROCARBONS ARE ILLUSTRATED. MAMMALS INCORPORATE ONE ATOM OF MOLECULAR OXYGEN INTO AROMATIC HYDROCARBONS WITH THE FORMATION OF ARENE OXIDES. SUBSEQUENT ENZYMATIC ADDITION OF WATER LEADS TO THE FORMATION OF TRANSDIHYDRODIOLS. THE LATTER COMPOUNDS CAN UNDERGO NADP+-DEPENDENT OXIDATION TO CATECHOLS. BACTERIA UTILIZE BOTH ATOMS OF MOLECULAR OXYGEN TO FORM CIS-DIHYDRODOILS. THE CYCLIC PEROXIDE (DIOXETANE) INTERMEDIATE IS HYPOTHETICAL. (MODIFIED AUTHOR ABSTRACT).
MJ OILS, BIODETERIORATION.
ID OIL-POLLUTION-CONTROL, SEA-GRANT-PROGRAM, NTISNOAA.
AN N COM-74-11013-05.

<414>

AU GIBSON, DAVID T.
IN DEP. MICROBIOL. UNIV. TEXAS. AUSTIN. TEX.
YR 71.
TI MICROBIAL OXIDATION OF AROMATIC HYDROCARBONS.
SO CRIT. REV. MICROBIOL. 1. P199- 223. 1971.
LG EN.
DE REVIEW AROM HYDROCARBON OXIDN MICROBE. BENZENE OXIDN MICROBE REVIEW. TOLUENE OXIDN MICROBE REVIEW. ETHYLBENZENE OXIDN MICROBE REVIEW. NAPHTHALENE OXIDN MICROBE

REVIEW. MAMMAL AROM OXIDN MICROBE REVIEW.

AN C 08119115999.

<415>

AU GIBSON, DAVID T.

IN DEP. MICROBIOL. UNIV. TEXAS. AUSTIN. TEX.

YR 72.

TI INITIAL REACTIONS IN THE DEGRADATION OF AROMATIC HYDROCARBONS.

SO DEGRADATION SYN. ORG. MOL. BIOSPHERE, PROC. CONF. P116-36. 1972.

LG EN.

DE REVIEW AROMATIC HYDROCARBON METAB. CARCINOGEN HYDROCARBON METAB REVIEW. BENZENE METAB REVIEW. TOLUENE METAB REVIEW. NAPHTHALENE METAB REVIEW.

AN C 07815093194.

<416>

AU GIBSON, DAVID T.

IN TEXAS UNIV AT AUSTIN DEPT OF MICROBIOLOGY. 408737.

YR 77. 13P.

TI THE MICROBIAL DEGRADATION OF AROMATIC PETROLEUM PRODUCTS.

NT FINAL REPT. 1 JUL 73-30 JUN 77. PRESENTED AT THE INTERNATIONAL SYMPOSIUM ON AQUATIC POLLUTANTS (2ND) SEP 76, AMSTERDAM.

PR PC A02/MF A01.

AB PSEUDOMONAS PXY WAS SHOWN TO OXIDIZE PARA- AND META-XYLENE TO THE CORRESPONDING TOLUIC ACIDS. THE LATTER COMPOUNDS WERE OXIDIZED TO 4- AND 3-METHYLCATECHOLS PRIOR TO THE ENZYMATIC FISSION OF THE AROMATIC NUCLEUS. PATHWAYS ARE PROPOSED FOR THE DEGRADATION OF BOTH XYLENE ISOMERS. THE GENES SPECIFYING THE ENZYMES RESPONSIBLE FOR XYLENE DEGRADATION ARE CARRIED OUT ON A TRANSMISSIBLE PLASMID. A NOCARDIA SPECIES OXIDIZED ORTHO-XYLENE TO 3,4- DIMETHYL CATECHOL. THE LATTER COMPOUND WAS FURTHER METABOLIZED TO PROPIONALDEHYDE AND PYRUVIC ACID. A PATHWAY IS PROPOSED FOR THE BIODEGRADATION OF ORTHO-XYLENE BY THIS ORGANISM. DIBENZOTHIOPHENE IS OXIDIZED BY A MUTANT STRAIN OF BEIJERINCKIA TO CIS-1, 2-DIHYDROXY-1,2-DIHYDRODIBENZOTHIOPHENE. ENZYMES PRESENT IN THE PARENT ORGANISM OXIDIZED THIS METABOLITE TO 3-HYDROXY-2-FORMYLBENZOTHIOPHENE WHICH WAS RESISTANT TO FURTHER DEGRADATION. A PATHWAY FOR THE MICROBIAL DEGRADATION OF DIBENZOTHIOPHENE IS PROPOSED. THE SAME MUTANT STRAIN OF BEIJERINCKIA OXIDIZED 2,-3-, AND 4-CHLOROBIPHENYL TO ANALOGOUS CIS-DIHYDRODIOLS. EACH METABOLITE WAS ISOLATED AND CHARACTERIZED. THE COMPONENTS OF A COMMERCIAL POLYCHLORINATED BIPHENYL, AROCLOR 1221, WERE IDENTIFIED AND QUANTIFIED BY GAS CHROMATOGRAPHY - MASS SPECTROMETRY. THE ONLY COMPONENTS IN THIS MIXTURE THAT WERE SIGNIFICANTLY OXIDIZED BY BEIJERINCKIA WERE BIPHENYL AND ITS MONOCHLORINATED DERIVATIVES. (AUTHOR).

MJ PETROLEUM-PRODUCTS, XYLENES, THIOPHENES, BIPHENYL.

MN BACTERIA, OXIDATION, METABOLISM, CHLORINE-COMPOUNDS, PSEUDOMONAS, NOCARDIA.

ID PLASMIDS, BEIJERINCKIA, META-XYLENE, PARA-XYLENE, ORTHO-XYLENE, BIODEGRADATION, MICROORGANISMS, MICROBIAL-DEGRADATION, NTISDODXA.

AN N AD-A047 092/2SL.

<417>

AU GIBSON, DAVID T.

IN TEXAS UNIV AT AUSTIN DEPT OF MICROBIOLOGY ARLINGTON, VA. 408737.

YR 76. 54P.

TI THE MICROBIAL DEGRADATION OF AROMATIC PETROLEUM PRODUCTS.

NT ANNUAL REPT. NO. 3, 1 JUL 75-30 JUN 76. SEE ALSO REPORT DATED 30 JUN 75, AD-A012 486.

PR PC$4.50/MF$2.25.

AB THE BIODEGRADATION OF ORTHO- XYLENE BY A SPECIES OF NOCARDIA IS INITIATED BY NUCLEAR OXIDATION TO FORM 3,4-DIMETHYLCATECHOL. THE LATTER COMPOUND IS APPARENTLY FORMED FROM CIS-3,4-DIMETHYL-3,5-CYCLOHEXADIEN-1,2-DIOL (CIS-O-XYLENE DIHYDRODIOL). ENZYMATIC FISSION OF 3,4-DIMETHYLCATECHOL PRODUCES AN ACID, 2-HYDROXY-5-METHYL-6-OXOHEPTA-2,4-DIENOIC ACID, THAT UNDERGOES SPECTRAL CHANGES AT ACID AND ALKALINE PH. FURTHER METABOLISM OF THE RING-FISSION PRODUCT OCCURS BY A HYDROLYTIC REACTION THAT FORMS ACETIC AND 2-OXOHEX-4-ENOIC ACIDS. ENZYMATIC HYDRATION OF THE LATTER COMPOUND TO GIVE 4-HYDROXY-2-OXOHEXANOATE IS FOLLOWED BY AN ALDOLASE REACTION THAT PRODUCE PYRUVATE AND PROPIONALDEHYDE. THE

PATHWAY PROPOSED FOR THE BIODEGRADATION OF O-XYLENE IS ANALOGOUS TO THOSE REPORTED FOR THE DEGRADATION OF A NUMBER OF AROMATIC COMPOUNDS. COMMERCIAL SAMPLES OF 2-, 3- AND 4-CHLOROBIPHENYL CONTAIN IMPURITIES THAT CAUSE LAG PERIODS IN THE GROWTH OF BEIJERINCKIA ON SUCCINATE. PURIFIED PREPARATIONS OF THESE COMPOUNDS ALSO INHIBITED THE INITIATION OF GROWTH OF THIS ORGANISM BUT NOT TO THE SAME EXTENT. PRELIMINARY OBSERVATIONS SUGGEST THAT INHIBITION MAY BE ASSOCIATED WITH THE EASE OF OXIDATION OF THE MONOCHLORINATED BIPHENYL ISOMERS.

MJ PETROLEUM-PRODUCTS, BIODETERIORATION, XYLENES, BACTERIA.

MN OXIDATION, BIPHENYL, MICROORGANISMS, THIOPHENES, DEGRADATION, CHEMICAL-ANALYSIS.

ID BIPHENYL-CHLORO, DIBENZOTHIOPHENES, SOIL-BACTERIA, NOCARDIA, SOIL-ANALYSIS, NTISDODN.

AN N AD-A026 120/9SL.

<418>

AU GIBSON, DAVID T.

IN TEXAS UNIV AT AUSTIN DEPT OF MICROBIOLOGY ARLINGTON, VA. 400737.

YR 75. 55P.

TI THE MICROBIAL DEGRADATION OF AROMATIC PETROLEUM PRODUCTS.

NT REPT. NO. 2 (ANNUAL), 1 JUL 74- 30 JUN 75. SEE ALSO ANNUAL REPT. NO. 2, AD-781 709.

PR PC$4.25/MF$2.25.

AB IT IS THE PURPOSE OF THIS CONTRACT TO INVESTIGATE THE MECHANISMS USED BY SOIL BACTERIA TO OXIDIZE ORTHO-, META- AND PARA- XYLENE AND RELATED AROMATIC COMPOUNDS. THE PATHWAY OF ORTHO- XYLENE BIODEGRADATION BY A NOCARDIA SPECIES IS STUDIED IN DETAIL. THE REGULATION AND GENETICS OF THE P- XYLENE PATHWAY ARE DISCUSSED. THE MICROBIAL DEGRADATION OF THE SULFUR-CONTAINING CONSTITUTENTS OF CRUDE PETROLEUM, INCLUDING THE INVESTIGATION OF THE METABOLISM OF DIBENZOTHIOPHENE BY BACTERIA AND THE METABOLIC PRODUCTS FORMED DURING THE DEGRADATION OF DIBENZOTHIOPHENE BY A BEIJERINCKIA SPECIES.

MJ BIODETERIORATION, BACTERIA, XYLENES.

MN METABOLISM, OXIDATION, THIOPHENES, PSEUDOMONAS, SOILS, DEGRADATION.

ID DIBENZOTHIOPHENES, SOIL- BACTERIA, NOCARDIA, CHEMICAL-REACTION-MECHANISMS, NTISDODN.

AN N AD-A012 486/7SL.

<419>

AU GIBSON, DAVID T. CARDINI, G. E. MASELES, F. C. KALLIO, REINO E.

IN DEP. OF MICROBIOL. UNIV. OF TEXAS. AUSTIN. TEX.

YR 70.

TI OXIDATIVE DEGRADATION OF AROMATIC HYDROCARBONS BY MICROORGANISMS. IV. INCORPORATION OF OXYGEN-18 INTO BENZENE BY PSEUDOMONAS PUTIDA.

SO BIOCHEMISTRY. 9. P1631-5. 1970.

LG EN.

DE BENZENE METAB PSEUDOMONAS. PSEUDOMONAS METAB BENZENE. AROM HYDROCARBONS BACTERIA. HYDROCARBONS AROM BACTERIA. BACTERIA AROM HYDROCARBONS.

AN C 07301001092.

<420>

AU GIBSON, DAVID T. HENSLEY, M. YOSHIOKA, H. MABRY, T. J.

IN DEP. OF MICROBIOL. UNIV. OF TEXAS. AUSTIN. TEX.

YR 70.

TI OXIDATIVE DEGRADATION OF AROMATIC HYDROCARBONS BY MICROORGANISMS. III. FORMATION OF (+)-CIS-2,3-DIHYDROXY-1-METHYL-4,6-CYCLOHEXADIENE FROM TOLUENE BY PSEUDOMONAS PUTIDA.

SO BIOCHEMISTRY. 9. P1626-30. 1970.

LG EN.

DE TOLUENE METAB PSEUDOMONAS. PSEUDOMONAS METAB TOLUENE. AROM HYDROCARBONS BACTERIA. HYDROCARBONS AROM BACTERIA. BACTERIA AROM HYDROCARBONS.

AN C 07301001091.

<421>

AU GIBSON, DAVID T. MAHADEVAN, VENKATANAYARANA. JERINA, DONALD M. YAGI, HARUHIKO. YEH, HERMAN J. C.

IN DEP. MICROBIOL. UNIV. TEXAS. AUSTIN. TEX.

YR 75.

TI OXIDATION OF THE CARCINOGENS BENZO(A)PYRENE AND BENZO(A)ANTHRACENE TO DIHYDRODIOLS BY A BACTERIUM.

SO SCIENCE. 189. P295-7. 1975.

LG EN.

DE BEIJERINCKIA BENZOANTHRACENE BENZOPYRENE METAB.

AN C 08311093629.

<422>
AU GILBERT E. GUESTEN H.
TI THE RADIOCHEMICAL DEGRADATION OF BIOLOGICALLY RESISTANT ORGANIC POLLUTANTS IN AQUEOUS SOLUTIONS.
SO HUSMANN, W. (ED.). VOM WASSER, BAND 41. (ON WATER, VOL. 41). (IN GER.). VIII+487P. ILLUS. VERLAG CHEMIE: WEINHEIM, WEST GERMANY. ISBN 3-527-25546-X. 1973 (1974) (RECD 1975) 359-368.
DE POLLUTION WATER TREATMENT PENTA CHLORO PHENOL TETRA CHLORO PHENOL TRI CHLORO PHENOL 2 4 DI CHLORO PHENOL 4 CHLORO PHENOL DECHLORINATION OXIDATION OXALIC-ACID.
AN B 76003383.

<423>
AU GILBERT, E.
IN INST. RADIOCHEM. KERNFORSCHUNGSZENT. KARLSRUHE. KARLSRUHE. GER.
YR 74.
TI DEGRADATION OF NOXIOUS ORGANIC SUBSTANCES IN WATER USING OZONE.
SO VOM WASSER. 43. P275-90. 1974.
LG GE.
DE OZONATION CHLOROPHENOL WATER. PHENOL CHLORO OZONATION WATER.
AN C 08226175088.

<424>
AU GLAZYRINA, O. I.
IN USSR.
YR 72.
TI POLAROGRAPHIC DETERMINATION OF PHTHALIC AND MALEIC ACIDS IN WASTE WATERS.
SO TR. VSES. NAUCHNO-ISSLED. INST. VODOSNABZH. KANALIZ. GIDROTEKH. SOORUZH. INZH. GIDROGEOL. 40, PT. 2. P111-19. 1972.
LG RS.
DE PHTHALIC ACID DETN WASTEWATER POLAROG. MALEIC ACID DETN WASTEWATER POLAROG. WASTEWATER ANALYSIS PHTHALIC MALEIC ACID.
AN C 08120126519.

<425>
AU GLOYNA, ERNEST F. FORD, DAVIS L.
IN ENGINEERING-SCIENCE, INC./TEXAS, AUSTIN.
YR 70. 292P*.
TI PETROCHEMICAL EFFLUENTS TREATMENT PRACTICES.
NT DETAILED REPT. SEE ALSO SUMMARY REPT. DATED FEB 70, PB-192-310.
PR PC$3.00/MF$0.95.
AB THE REPORT REVIEWS VARIOUS ASPECTS OF THE PETROCHEMICAL INDUSTRY AS RELATED TO POLLUTION CONTROL. THE AREAS REVIEWED COVER THE FOLLOWING TOPICS: HISTORY; DESCRIPTION (PRINCIPAL PETROCHEMICAL PRODUCTS, PROJECTED GROWTH); PETROLEUM RAW MATERIALS; PETROCHEMICAL PROCESSES; CHEMICAL AND PROCESS RELATED CLASSIFICATION OF WASTES; WASTE POLLUTIONAL EFFECTS ON RECEIVING WATER (EFFECTS ON WATER USE AND REUSE, PHYSIOLOGICAL EFFECTS, IDENTIFICATION AND MONITORING); TREATMENT AND CONTROL; ECONOMIC ASPECTS OF WASTE TREATMENT.
MJ INDUSTRIAL-WASTES, WATER- POLLUTION, CHEMICAL-INDUSTRY, WATER- POLLUTION, INDUSTRIAL-WASTE- TREATMENT, CHEMICAL-INDUSTRY, PETROCHEMISTRY, WATER-POLLUTION.
MN REVIEWS, PETROLEUM-PRODUCTS, HISTORY, FORECASTING, CLASSIFICATIONS, BIOCHEMICAL-OXYGEN-DEMAND, WATER-RECLAMATION, TOXICOLOGY, AQUATIC-BIOLOGY, MONITORS, ECONOMIC-ANALYSIS, SEWAGE-TREATMENT, ALKENES, AROMATIC-COMPOUNDS, PHENOLS, SULFUR-ORGANIC-COMPOUNDS.
ID WATER-POLLUTION-CONTROL.
AN N PB-205 824.

<426>
AU GOLBER M B. THROOP W M.
YR 75.
TI PROCESS MANAGEMENT APPROACH OF WASTE WATER TREATMENT TO MEET LOW HEXANE SOLUBLE REQUIREMENTS.
SO LANGWORTHY, VIRGIL W. (ED.). PROCEEDINGS OF THE THIRD ANNUAL POLLUTION CONTROL CONFERENCE OF THE WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION. INDUSTRY SOLUTIONS '75: AIR-WATER-NOISE-SOLID WASTE. APRIL 1-4, 1975. XI+915P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS, INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40114-2. 449-465.
DE POLLUTION CONTROL.
AN B 76029374.

<427>
AU GOLDSTEIN, D. J. YUNG, DAVID.

IN WATER PURIFICATION ASSOCIATES, CAMBRIDGE, MASS. ENVIRONMENTAL RESEARCH LAB. RESEARCH TRIANGLE PARK, N.C.
YR 77. 486P.
TI WATER CONSERVATION AND POLLUTION CONTROL IN COAL CONVERSION PROCESSES.
NT FINAL REPT. JUN 75-DEC 76.
PR PC A21/MF A01.
AB THE REPORT GIVES RESULTS OF A STUDY TO DETERMINE WATER CONSUMPTION AND ENVIRONMENTAL IMPACTS OF COAL CONVERSION PROCESSES IN WESTERN STATES. PART 1 GIVES BRIEF DESCRIPTIONS AND PROCESS WATER REQUIREMENTS FOR NINE CONVERSION PROCESSES. DETAILED DESIGNS AND ANALYSES ARE GIVEN FOR THE HYGAS, SYNTHANE, AND SOLVENT REFINED COAL (SRC) PROCESSES, AND FOR LURGI COMBINED-CYCLE POWER GENERATION. AT THREE PROPOSED SITES (IN NORTH DAKOTA), NEW MEXICO, AND WYOMING), COMPLETE WATER REQUIREMENTS AND EFFLUENTS, INCLUDING ALL MINING AND RELATED OFF-SITE USES, ARE GIVEN FOR THE POWER, HYGAS, AND SRC PLANTS. THE SYNTHANE PROCESS IS ANALYZED ONLY AT THE WYOMING SITE. PART 2 GIVES ANALYSES OF INFLUENT AND EFFLUENT WATERS, WITH EXAMPLES FOR STUDY. FOR THE THREE SELECTED PLANTS AT THE NORTH DAKOTA SITE, SOURCE WATER OF GOOD QUALITY IS ASSUMED TO BE CHEAP AND AVAILABLE. FOR THREE PLANTS IN NEW MEXICO, SOURCE WATER WILL BE AVAILABLE BUT IS BRACKISH. ALL THE PLANTS AT THE WYOMING SITE RECEIVE SEWAGE FROM A SATELLITE TOWN; ADDITIONAL FRESH WATER IS AVAILABLE BUT IS ASSUMED TO BE EXPENSIVE. FOR EACH PROCESS AT EACH SITE (10 CASES) AN INTEGRATED WATER TREATMENT PLANT BLOCK FLOW DIAGRAM IS GIVEN WITH APPROXIMATE COSTS AND ENERGY REQUIREMENTS.
MJ WATER-CONSUMPTION, WATER-POLLUTION-CONTROL, COAL, INDUSTRIAL-WASTE-TREATMENT.
MN ACTIVATED-SLUDGE-PROCESS, DESIGN-CRITERIA, WATER-QUALITY, MINING, ELECTRIC-POWER-GENERATION, COAL-GASIFICATION, BOILERS, BURNERS, PLANT-LOCATION, HYDROGEN-SULFIDE, CARBON-DIOXIDE, COAL-PREPARATION, PROCESS-CHARTING, WATER-ANALYSIS, SEPARATION, AMMONIA, COOLING-SYSTEMS, PHENOLS, EXTRACTION, CHEMICAL-ANALYSIS, ACTIVATED-CARBON, REVERSE-OSMOSIS, ION-EXCHANGING, EVAPORATION, FREEZING, OXIDATION.
ID LURGI-PROCESS, HYGAS-PROCESS, SRC-PROCESS, COMBINED-CYCLE-ELECTRIC-POWER-GENERATION, SYNTHANE-PROCESS, BIOLOGICAL-INDUSTRIAL-WASTE-TREATMENT, BIGAS-PROCESS, WINKLER-PROCESS, SYNTHOIL-PROCESS, KOPPERS-TOTZEK-PROCESS, WESTERN-REGION-UNITED-STATES, NTISEPAORD.
AN N PB-269 568/2SL.

<428>

AU GOLLNICK, KLAUS. STRACKE, H. U.
IN ABT. STRAHLENCHEM. MAX-PLANCK- INST. KOHLENFORSCH. MUELHEIM/RUHR. GER.
YR 71.
TI PHOTOLYSIS OF DIMETHYL SULFOXIDE IN WATER AND ACETONITRILE. PRODUCT ANALYSIS.
SO TETRAHEDRON LETT. P203-6. 1971.
LG EN.
DE DIMETHYL SULFOXIDE PHOTOLYSIS PRODUCTS.
AN C 07426149123.

<429>

AU GOLOVINA, Z. M. AGAL'TSOV, A. M.
IN USSR.
YR 69.
TI CHROMATOGRAPHIC ANALYSIS OF WASTE WATERS.
SO SOSTOYANIE PUTI ULUCHSHENIYA OCHISTKI STOCHNYKH VOD, GAZOV. VYBROSOV ATMOS. P125-6. 1969.
LG RS.
DE WASTE WATER CHROMATOG ANAL. TRICHLOROETHYLENE DETN WASTE WATER. BENZENE DETN WASTE WATER. CHLOROBENZENE DETN WASTE WATER. METHOXYLOL DETN WASTE WATER.
AN C 07504024990.

<430>

AU GOLOVLEVA L A. CHERVIN I I. GANBAROV KH G. ISMAILOV N M. SKRYABIN G K.
YR 75.
TI PECULIARITIES OF THE PRIMARY OXIDATION OF PSEUDO CUMENE BY THE MICROORGANISM PSEUDOMONAS-AERUGINOSA.
SO DOKL BIOL SCI (ENGL TRANSL DOKL AKAD NAUK SSSR SER BIOL). 222 (1- 6). 241-242.
■FILE:ST2
DE METABOLISM REGULATION MICROBIAL TRANSFORMATION.

AN B 76074986.

<431>
AU GOLOVLEVA, L. A. CHERVIN, I. I.
GANBAROV, KH. G. ISMAILOV, N. M.
SKRYABIN, G. K.
IN OTD. MIKROBIOL. BAKU. USSR.
YR 75.
TI PRIMARY OXIDATION OF PSEUDOCUMENE BY
PSEUDOMONAS AERUGINOSA
MICROORGANISMS.
SO DOKL. AKAD. NAUK SSSR. 222. P1448-9
(MICROBIOL). 1975.
LG RS.
DE PSEUDOCUMENE OXIDN PSEUDOMONAS.
AN C 08313110964.

<432>
AU GOLUB, A. I. PETROVA, L. M.
IN USSR.
YR 73.
TI SORBENTS FOR THE GAS CHROMATOGRAPHIC
ANALYSIS OF AQUEOUS FORMIC ACID
SOLUTIONS.
SO SB. NAUCHN. TR. GAZOV. KHROMATOGR.
NAUCHNO-ISSLED. FIZ.- KHIM. INST.
NO. 18. P27-8. 1973.
LG RS.
DE FORMIC ACID SOLN GAS CHROMATOG.
SORBENT GAS CHROMATOG FORMIC ACID.
AN C 08122145421.

<433>
AU GOLUB, A. I. PETROVA, L. M.
IN USSR.
YR 72.
TI NEW SORBENT FOR GAS- CHROMATOGRAPHIC
ANALYSIS OF AQUEOUS FORMIC ACID
SOLUTIONS.
SO NOV. SORBENTY KHROMATOGR. NO. 18.
P27-8. 1972.
LG RS.
DE FORMIC ACID GAS CHROMATOG.
AN C 08016090941.

<434>
AU GOMEZ CRESPO, DANIEL EDUARDO.
IBERTIS ACUNA, MARIA SOFIA.
IN ARGENT.
YR 70.
TI CONTAMINATION OF WATERS IN THE
METROPOLITAN AREA.
SO SANEAMIENTO. 34. P473-96. 1970.
LG SP.
DE RIVER POLLUTION ARGENTINA. PHENOL
RIVER ARGENTINA. DETERGENT RIVER
ARGENTINA. SEWAGE RIVER ARGENTINA.
AN C 07816101739.

<435>
AU GONCHARENKO, G. K. KOVALENKO, V. I.
CHERNYSHEV, I. S.
IN USSR.
YR 68.
TI EXTRACTION OF PHENOLS ON A
CENTRIFUGAL MIXER-SETTLER DURING THE
PURIFICATION OF WASTE WATERS FROM
KHARKOV BY-PRODUCT COKE PLANT.
SO VESTN. KHAR'KOV. POLITEKH. INST. NO.
34. P82-6. 1968.
LG RS.
DE PHENOL EXTN WASTE WATERS. COKE PLANT
WASTES PHENOL EXTN.
AN C 07404015603.

<436>
AU GONCHAROV, G. D. MIKRYAKOV, V. R.
IN BUREAU OF COMMERCIAL FISHERIES,
WASHINGTON, D.C. OFFICE OF FOREIGN
FISHERIES (TRANSLATIONS).
YR 71. 8P.
TI THE EFFECT OF LOW CONCENTRATIONS OF
PHENOL ON ANTIBODY FORMATION IN
CARP, 'CYPRINUS CARPIO' L (VLIYANIE
MALYKH KONTSENTRATSII FENOLA NA
ANTITELOOBRAZOVANIE U KARPOV
'CYPRINUS CARPIO' L).
NT TRANS. OF MONO. VOPROSY VODNOI
TOKSIKOLOGII (PROBLEMS OF AQUATIC
TOXICOLOGY), MOSCOW, 1970 P171-175,
BY ROBERT M. HOWLAND.
PR PC$3.00 MF$0.95.
AB THE RESULTS OF INVESTIGATIONS OF THE
EFFECT OF LOW CONCENTRATIONS OF
PHENOL ON ANTIBODY FORMATION IN CARP
IN A CHRONIC EXPERIMENT SHOW THAT IN
HOLDING CARP IN A 12.5 MG/L PHENOL
SOLUTION THE FORMATION OF
IMMUNOGLOBULINS DECREASES AND THE
AMOUNT OF TOTAL PROTEIN IN THE BLOOD
SERA OF THE FISH DROPS. APPARENTLY,
AS A RESULT OF DISTURBANCE OF THE
MOTOR-FOOD ACTIVITY OF THE FISH
UNDER PROLONGED INFLUENCE OF PHENOL,
ENDOGENOUS FEEDING IS INTENSIFIED IN
THE CARP ORGANISM, WHICH LEADS TO
DECREASE IN THE SYNTHESIS OF
ANTIBODIES. AT THE SAME TIME THE
POSSIBILITY OF DISTURBANCE TO
PERCEPTION OF INFORMATION BY
IMMUNOGLOBULIN PRODUCER-CELLS IS NOT
EXCLUDED, AND CONSEQUENTLY THE
RESISTANCE OF THE FISH TO INFECTION
IS DEPRESSED. (AUTHOR).
MJ FISHES, TOXICOLOGY, PHENOL, FISHES,
CARP, PHENOL, USSR, FISHERIES,

ANTIBODY-FORMATION, PHENOL.
MN POISONS, ECOLOGY, TOXIC- TOLERANCES, METABOLISM, PHYSIOLOGY, TRANSLATIONS.
ID CYPRINUS-CARPIO.
AN N PB-203 804-T.

<437>
AU GONCHAROVA A V.
YR 75.
TI EFFECT OF PHENOL ON BLUE-GREEN ALGAE OSCILLATORIA-SPLENDIDA.
SO BIOL VNUTR VOD INF BYULL. 28. 19-21.
DE ABSTRACT BACTERIA PHENOL REPRODUCTION PHOTOSYNTHESIS GROWTH RESPIRATION.
AN B 77009945.

<438>
AU GONCHAROVA, I. A. KHOMENKO, A. N. SEMENOV, A. D.
IN KANNER (LEO) ASSOCIATES, REDWOOD CITY, CALIF.
YR 74. 11P.
TI DETERMINATION OF NONVOLATILE CARBOXYLIC ACIDS IN NATURAL WATERS.
NT TRAN-TRANSL. INTO ENGLISH FROM GIDROKHIM MATER. (USSR), V. 41, 1966 P 116-120.
PR PC$3.25/MF$2.25.
AB THE SAMPLE, 0.51 H2O, MADE ALKALINE TO PH 8-9, WAS EVAPORATED TO DRYNESS AND DRIED AT 60 DEG; THE RESIDUE WAS DISSOLVED IN 1: 1 HCL AND EXTRACTED TWO TIMES WITH 50 ML ETHER. THE ETHER EXTRACT WAS NEUTRALIZED WITH 0.01 N NAOH, THE ETHER WAS REMOVED, AND THE AQUEOUS PHASE WAS EVAPORATED TO A L ML VOLUME, ACIDIFIED WITH H2SO4, AND PASSED THROUGH A COLUMN FILLED WITH SIO2. THE ACIDS WERE SEPARATED INTO FOUR FACTIONS (A,B,C,D) BY SUBSEQUENT ELUTION WITH 5, 10, 20, AND 30 PERCENT BUOH IN CHCL3 AND EACH FRACTION WAS SEPARATED BY PAPER CHROMATOGRAPHY; THE SOLVENT WAS 7: 3 PHOH-1 PERCENT HCO2H (FRACTIONS A AND B) AND 18: 2: 9 BUOH-1 PERCENT HCO2H-H2O (FRACTIONS C AND D). THE SPOTS WERE LOCATED BY SPRAYING WITH 0.04 PERCENT ALCOHOLIC BROMOCRESOL GREEN. THE FRACTIONS CONSIST OF: (A) PYRUVIC, FUMARIC, GLUTARIC, AND ADIPIC; (B) SUCCINIC AND LACTIC; (C) OXALIC AND GALLIC; AND (D) CITRIC ACIDS. (AUTHOR).
MJ CARBOXYLIC-ACIDS, WATER.
MN ALCOHOLS, CHEMICAL-REACTIONS, ETHERS, HYDROCHLORIC-ACID, NEUTRALIZERS, SOLVENT-EXTRACTION, SULFURIC-ACID.
ID NTISNASA.
AN N N74-32581/2ST.

<439>
AU GONCHAROVA, I. A. KHOMENKO, A. N. ZHUK, I. P.
IN GIDROKHIM. INST. NOVOCHERKASSK. USSR.
YR 74.
TI SEPARATE DETERMINATION OF PHENOL, O-CRESOL, M-CRESOL, 2,5- XYLENOL, AND GUAIACOL IN NATURAL WATERS.
SO GIDROKHIM. MATER. 61. P100-9. 1974.
LG RS.
DE PHENOL DETN NATURAL WATER. CRESOL DETN NATURAL WATER. XYLENOL DETN NATURAL WATER. GUAIACOL DETN NATURAL WATER.
AN C 08314120535.

<440>
AU GOODE J W. RAUSINA G. KEPLINGER M L. CALANDRA J C.
YR 76.
TI ACUTE STATIC AND SUBACUTE DYNAMIC TOXICITY STUDIES CONDUCTED WITH FREE AND COMBINED CYANIDE IN RAINBOW TROUT AND FATHEAD MINNOWS.
SO TOXICOL APPL PHARMACOL. 37 (1). 118.
DE ABSTRACT METABOLISM.
AN B 77026788.

<441>
AU GOODLEY P C. GORDON M.
YR 76.
TI CHARACTERIZATION OF INDUSTRIAL ORGANIC COMPOUNDS IN WATER.
SO TRANS KY ACAD SCI. 37 (1-2). 11- 15.
DE KENTUCKY USA POLLUTION SEDIMENT HYDRO CARBONS PHENOLS AROMATIC ACIDS ESTERS GAS CHROMATOGRAPHY MASS SPECTROMETRY MICRO IR SPECTROSCOPY MICRO IR SPECTROSCOPY.
AN B 63005052.

<442>
AU GORETTI G. PETRONIO B M. MASSI M. DINU D.
YR 75.
TI DETERMINATION OF PHENOLS BY CHANNEL THIN LAYER CHROMATOGRAPHY.
SO ANN CHIM. 65 (11-12). (RECD 1976) 741-746.

DE ORGANISMS TOXICITY WATER POLLUTANTS.
AN B 64030023.

<443>
AU GORODETSKII, I. YA. LEVITANAITE, R.
OLEVSKII, V. M. LEGOCHKINA, L. A.
KUZ'MICHEV, E. F.
IN USSR.
YR 69.
TI EXTRACTION OF CARBOXYLIC ACIDS FROM
CYCLOHEXANE OXIDATION PRODUCTS.
SO ZHIDK. EKSTR. TR. VSES. NAUCH.-
TEKH. SOVESHCH. 3RD. P376-81. 1969.
LG RS.
AV ROMANKOVA, P. G.
DE EXTN CARBOXYLIC ACIDS WATER.
CARBOXYLIC ACIDS EXTN WATER. ACIDS
CARBOXYLIC WATER EXTN. WATER EXTN
CARBOXYLIC ACIDS. CYCLOHEXANE OXIDN
PRODN CYCLOHEXANOL. CYCLOHEXANOL
PRODN OXIDN CYCLOHEXANE. OXIDN
CYCLOHEXANE PRODN CYCLOHEXANOL.
AN C 07309044970.

<444>
AU GOSWAMI, S. R. GAUDY, A. F. JR.
IN BIOENG. LAB. OKLAHOMA STATE UNIV.
STILLWATER. OKLA.
YR 71.
TI REMOVAL OF ALDEHYDES AND KETONES BY
STRIPPING AND BY COMBINED STRIPPING
AND MICROBIAL METABOLISM.
SO PROC. MID-ATL. IND. WASTE CONF. 4TH.
P253-66. 1971.
LG EN.
DE ALDEHYDE REMOVAL WASTEWATER
BIODEGRDN. KETONE REMOVAL WASTEWATER
BIODEGRDN. BIODEGRDN REMOVAL
ALDEHYDE KETONE WASTEWATER.
STRIPPING REMOVAL ALDEHYDE KETONE
WASTEWATER.
AN C 08106029281.

<445>
AU GOTTSCHALDT, NORBERT.
IN VEB WASSERVERSORG. ABWASSERBEHANDL.
BERLIN. E. GER.
YR 70.
TI MATHEMATICAL INTERPRETATION OF
ALDEHYDE TOXICITY IN AQUATIC
ORGANISMS .
SO FORTSCHR. WASSERCHEM. IHRER
GRENZGEB. NO. 12. P52-61. 1970.
LG GE.
DE ALDEHYDES TOXICITY AQUATIC MATH.
AQUATIC ALDEHYDES TOXICITY MATH.
TOXICITY ALDEHYDES AQUATIC MATH.
AN C 07309043355.

<446>
AU GOULD, JOSEPH PETER.
IN THE UNIVERSITY OF MICHIGAN (0127)
PH.D. 1971 139PP.
YR 71.
TI THE KINETICS AND MECHANISM OF THE
OXIDATION OF PHENOL BY GASEOUS OZONE
IN DILUTE AQUEOUS SOLUTIONS.
SO DAI V32(11), SEC B, P6730.
DE CHEMISTRY, WATER (0826).
AN D ADG72-14879.

<447>
AU GOULDEN P D. BROOKSBANK P. DAY M
B.
YR 73.
TI DETERMINATION OF SUBMICROGRAM LEVELS
OF PHENOL IN WATER.
SO ANAL CHEM. 45 (14). 2430-2433.
DE CONTINUOUS DISTILLATION LARGE
SAMPLES AUTOMATED SYSTEM COLORIMETRY
WATER POLLUTION.
AN B 59028314.

<448>
AU GOULDEN, PETER D. AFGHAN, BADAR K.
BROOKSBANK, PETER.
IN ENVIRONMENT CANADA, INLAND WATERS
BRANCH, WATER QUALITY DIV. OTTAWA,
ONT.
YR 72.
TI DETERMINATION OF NANOGRAM QUANTITIES
OF SIMPLE AND COMPLEX CYANIDES IN
WATER.
SO ANALYTICAL CHEMISTRY. WASHINGTON,
D.C. 44(11): 1845-1849, SEPT. 1972.
LG EN.
AB NONE.
ID CYANIDE.
DE TOXIC MATERIALS, NITROGEN COMPOUNDS,
POLLUTANT DETECTION, WATER QUALITY
MEASUREMENTS.
AN P 7300685.

<449>
AU GOVOROVA, L. M. PROSKURYAKOV, V. A.
CHISTYAKOV, A. N.
IN LENINGR. TEKHNOL. INST. IM.
LENSOVETA. LENINGRAD. USSR.
YR 70.
TI OXIDATION OF QUINOLINE BY
ATMOSPHERIC OXYGEN IN AN AQUEOUS-
ALKALINE MEDIUM.
SO ZH. PRIKL. KHIM. (LENINGRAD). 43.
P2356-60. 1970.
LG RS.
DE AIR OXIDN QUINOLINE. OXIDN QUINOLINE
AIR. QUINOLINE OXIDN AIR. NICOTINIC

ACID QUINOLINE OXIDN.
AN C 07415076277.

<450>
AU GRABINSKA-LONIEWSKA A.
YR 74.
TI STUDIES ON THE ACTIVATED SLUDGE BACTERIA PARTICIPATING IN THE BIO DEGRADATION OF METHANOL FORMALDEHYDE AND ETHYLENE GLYCOL PART 1 ISOLATION AND IDENTIFICATION.
SO ACTA MICROBIOL POL SER B MICROBIOL APPL. 6 (2). 75-81.
DE PSEUDOMONAS ACHROMOBACTER FLAVOBACTERIUM MYCOBACTERIUM XANTHOMONAS ACETOBACTER ALCALIGENES MICROCOCCUS SARCINA INDUSTRIAL WASTE TREATMENT POLY ESTER FIBER.
AN B 59028392.

<451>
AU GRABINSKA-LONIEWSKA A.
YR 74.
TI STUDIES ON THE ACTIVATED SLUDGE BACTERIA PARTICIPATING IN THE BIO DEGRADATION OF METHANOL FORMALDEHYDE AND ETHYLENE GLYCOL PART 2 UTILIZATION OF VARIOUS CARBON AND NITROGEN COMPOUNDS.
SO ACTA MICROBIOL POL SER B MICROBIOL APPL. 6 (2). 83-88.
DE INDUSTRIAL WASTE TREATMENT POLY ESTER FIBERS.
AN B 59028391.

<452>
AU GRABINSKA-LONIEWSKA A.
YR 73.
TI FORMALDEHYDE BIO DEGRADATION IN THE PROCESS OF SEWAGE TREATMENT BY THE ACTIVE SEDIMENT METHOD.
SO GAZ WODA TECH SANIT. 47 (8). 264-268.
DE MICROORGANISMS INDUSTRIAL WASTE WATER TOXIC POLLUTANT.
AN B 57040210.

<453>
AU GRACHEVA M P. SHKODICH P E. TREGUBOV B A. TIKHOMIROV YU P. FILYUKOVA T V.
YR 74.
TI USE OF OZONE FOR TERTIARY TREATMENT OF INDUSTRIAL WASTE WATERS AFTER BIOLOGICAL TREATMENT.
SO GIG SANIT. (12). (RECD 1975) 90- 91.
DE POLLUTION METHANOL ACETONE PHENOL CARCINOGENS.
AN B 60045969.

<454>
AU GRACHEVA, M. P.
IN USSR.
YR 72.
TI SOLID INDUSTRIAL WASTES AS A SOURCE OF BENZO(A)PYRENE CONTAMINATION OF SUBTERRANEAN WATERS.
SO VOP. PROFIL. ZAGRYAZNENIYA VNESH. SREDY, CHASTNOSTI VODOEMOV, KANTSEROGEN. VESHCHEST. P85-7. 1972.
LG RS.
DE BENZOPYRENE POLLUTION WATER.
AN C 07902009554.

<455>
AU GRAEF, W. NOWAK, W.
YR 66. 16P.
TI PROMOTION OF GROWTH IN LOWER AND HIGHER PLANTS BY CARCINOGENIC POLYCYCLIC AROMATICS.
AV TRANSLATED BY H. TOBIAS FROM ARCH. HYG. BAKTERIOL. 150 P513-528 1966.
PR PC A02/MF A01.
AB THE EFFECT OF FLUORANTHENE, 1.12-BENZOPERYLENE, 3.4-BENZOFLUORANTHENE, INDENO(1.2.3. -CD-)PYRENE, 1.2-BENZOANTHRACENE, 3.4- BENZOPYRENE AND 1.2.5.6-DIBENZO- ANTHRACENE ON THE GROWING OF ALGA CULTURES (CHLORELLA VULGARIS, SCENEDESMUS OBLIQUUS, ANKISTRODESMUS ORAUNII) AND ON SOIL AND HYDROCULTURES OF HIGHER PLANTS (TOBACCO, RYE, RADISH) ARE TESTED IN A SERIES OF EXAMINATIONS. THE MENTIONED SUBSTANCES WERE APPLIED IN THE NUTRIENT SOLUTIONS OR IN THE WATER, IN CONCENTRATIONS OF 10 TO 20 LITRE, USING 1 GAMMA /LITRE OF POLYETHYLENEGLYCOL (MOLECULAR WEIGHT OF 200) AS A SOLUTION CARRIER. ALL SUBSTANCES HAD GROWTH-PROMOTING EFFECTS ON PLANTS, 3.4-BENZOPYRINE HAVING BEEN THE MOST EFFECTIVE ONE. THE DEGREE OF EFFICIENCY OF THE OTHER SUBSTANCES CORRESPONDED ESSENTIALLY TO THEIR CARCINOGENIC ACTIVITY. (ERA CITATION 02: 004006).
MJ COAL-INDUSTRY, PETROLEUM- INDUSTRY, PLANTS, POLYCYCLIC-AROMATIC-HYDROCARBONS.
MN AIR-POLLUTION, ALGAE, CARCINOGENS, ENVIRONMENTAL-EFFECTS, FOOD-CHAINS, GROWTH, HEALTH-HAZARDS, LAND-POLLUTION, MAN, RADISHES, RYE,

SOILS, TOBACCO.
ID ERDA-560303, ERDA-020600, ERDA-016000, TRANSLATIONS, WEST-GERMANY, AIR-POLLUTION-EFFECTS-PLANTS, NTISERDAT.
AN N ORNL-TR-4111.

<456>
AU GRAF, OTTO. BALOGH, FRANTISEK.
YR 69.
TI ANALYTICAL METHODS FOR DETERMINING CYANIDE IN WASTE WATERS.
TR ANALYTICKE METODY PRO STANOVENI KYANIDU V ODPADNICH VODACH.
PB INGSERVIS. KCS 28.
PG 54 PP.
DE CYANIDE ANALYSIS WASTE WATER.
AN C 07604017599.

<457>
AU GREEN M H L. BRIDGES B A. ROGERS A M. HORSPOOL G. MURIEL W J. BRIDGES J W. FRY J R.
YR 77.
TI MUTAGEN SCREENING BY A SIMPLIFIED BACTERIAL FLUCTUATION TEST USE OF MICROSOMAL PREPARATIONS AND WHOLE LIVER CELLS FOR METABOLIC ACTIVATION.
SO MUTAT RES. 48 (3-4). 287-294.
DE SALMONELLA-TYPHIMURIUM ESCHERICHIA-COLI RAT LIVER SPECIES SPECIFICITY 9 10 DI METHYL-1 2 BENZ ANTHRACENE BENZ A PYRENE 2 ACETAMIDO FLUORENE MUTAGENS.
AN B 64044924.

<458>
AU GREENHOUSE G.
YR 76.
TI THE EVALUATION OF TOXIC EFFECTS OF CHEMICALS IN FRESH WATER BY USING FROG EMBRYOS AND LARVAE.
SO ENVIRON POLLUT. 11 (4). 303-315.
DE RANA-PIPIENS XENOPUS-LAEVIS POLLUTANT TEST SYSTEM N PHENYL-ALPHA NAPHTHYLAMINE OCTYL PHENYL-ALPHA NAPHTHYLAMINE P P DI OCTYL DI PHENYLAMINE HYDRAZINE METHYL HYDRAZINE DI METHYL HYDRAZINE LETHAL TERATOGENIC LEVELS.
AN B 63048092.

<459>
AU GREGOROWICZ, ZBIGNIEW. GORKA, PIOTR.
IN INST. CHEM. ANAL. OGOLNEJ. POLITECH. SLASKA. GLIWICE. POL.
YR 73.
TI CYANIDE DETERMINATION IN COKING-PLANT WASTE WATERS.
SO KOKS, SMOLA, GAZ. 18. P81-2. 1973.
LG PO.
DE CYANIDE DETN WASTE WATER. WASTE WATER ANALYSIS CYANIDE.
AN C 07910057367.

<460>
AU GREGOROWICZ, ZBIGNIEW. GORKA, PIOTR.
IN POLITECH. GLIWICE. GLIWICE. POL.
YR 71.
TI METHODS FOR DETERMINATION OF CYANIDE IONS.
SO CHEM. ANAL. (WARSAW). 16. P703- 15. 1971.
LG PO.
DE REVIEW CYANIDE DETN. WASTE ANALYSIS CYANIDE REVIEW. WATER SURFACE ANALYSIS CYANIDE REVIEW.
AN C 07610053955.

<461>
AU GRIEVES, R. B. CHAREWIC, W. BRIEN, S. M.
IN DEP. CHEM. ENG. UNIV. KENTUCKY. LEXINGTON. KY.
YR 74.
TI SEPARATION OF PHENOL FROM DILUTE ALKALINE AQUEOUS SOLUTION BY SOLVENT EXTRACTION, SOLVENT SUBLATION, AND FOAM FRACTIONATION.
SO ANAL. CHIM. ACTA. 73. P293-300. 1974.
LG EN.
DE PHENOL SEPN. EXTN PHENOL SEPN. SUBLATION PHENOL SEPN. FOAM FRACTIONATION PHENOL SEPN. FRACTIONATION FOAM PHENOL SEPN. SURFACTANT PHENOL SEPN.
AN C 08208051111.

<462>
AU GRIFFIN W M. COONEY J J.
YR 77.
TI DEGRADATION OF MODEL RECALCITRANT HYDRO CARBONS BY MICROORGAND2MS FROM FRESH WATER ECOSYSTEMS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 77. 360.
DE ABSTRACT BACTERIA FUNGI PRISTANE TETRA DECADIENE BENZENE CYCLO HEXANE CO METABOLISM.
AN B 77050304.

<463>

AU GRIFFITH W L. COMPERE A L.
YR 76.
TI METHOD FOR THE ISOLATION OF ORGANISMS WHICH DEGRADE POLY PHENOLIC COMPOUNDS INCLUDING LIGNINS AND TANNINS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 76. 033.
DE ABSTRACT BACTERIA FUNGI COLORED METAL PHENOL COMPLEXES.
AN B 76043498.

<464>

AU GRIMMER G. BOEHNKE H.
YR 75.
TI POLY CYCLIC AROMATIC HYDRO CARBON PROFILE ANALYSIS OF HIGH PROTEIN FOODS OILS AND FATS BY GAS CHROMATOGRAPHY.
SO J ASSOC OFF ANAL CHEM. 58 (4). 725-733.
DE SUNFLOWER OIL YEAST MEAT POULTRY FISH GAS LIQUID CHROMATOGRAPHY SEPHADEX LH-20 COLUMN CHROMATOGRAPHY METHANOLIC POTASSIUM HYDROXIDE SAPONIFICATION FLAME IONIZATION DETECTOR UV SPECTROSCOPY BENZO A ANTHRACENE CHRYSENE BENZO B FLUORANTHENE BENZO J FLUORANTHENE BENZO K FLUORANTHENE BENZO E PYRENE BENZO A PYRENE DI BENZ A J ANTHRACENE BENZO-GHI-PERYLENE DI BENZ A H ANTHRACENE CARCINOGENS.
AN B 60062162.

<465>

AU GROB, K. ZUERCHER, F.
IN INST. WATER RESOUR. WATER POLLUT. CONTROL. SWISS FED. INST. TECHNOL. DUEBENDORF. SWITZ.
YR 76.
TI STRIPPING OF TRACE ORGANIC SUBSTANCES FROM WATER. EQUIPMENT AND PROCEDURE.
SO J. CHROMATOGR. 117. P285-94. 1976.
LG EN.
DE OCTANE STRIPPING WATER. NONANE STRIPPING WATER. TOLUENE STRIPPING WATER. ETHYLBENZENE STRIPPING WATER. XYLENE STRIPPING WATER. GAS CHROMATOG ORG COMPD WATER.
AN C 08510068042.

<466>

AU GROB, R L. KAISER, M A.
IN VILLANOVA UNIV. CHEMISTRY DEPT. VILLANOVA, PA 19085.
YR 76.
TI GAS CHROMATOGRAPHIC DETERMINATION OF SOME POLAR WATER POLLUTANTS USING POROUS POLYMERS.
SO JOURNAL OF ENVIRONMENTAL SCIENCE AND HEALTH--PART A, A11(10-11): 623-634, 1976.
LG EN.
AB NONE.
ID CHROMOSORB, HEADSPACE ANALYSIS, ACETALDEHYDE, ACETIC ACID, HEXAFLUOROACETONE, METHANOL.
DE POLYMERS, CHEMICAL POLLUTANTS, POLLUTANT ANALYSIS, GAS CHROMATOGRAPHY WATER POLLUTANTS.
AN P 7702425.

<467>

AU GROENEWEGEN D. STOLP H.
IN INSTITUT FUR ALLGEMEINE BOTANIK DER UNIVERSITAT HAMBURG, ABT. F. MIKROBIOLOGIE.
YR 76.
TI MICROBIAL BREAKDOWN OF POLYCYCLIC AROMATIC HYDROCARBONS (AUTHOR'S TRANSL).
TR MIKROBIELLER ABBAU VON POLYZYKLISCHEN AROMATISCHEN KOHLENWASSERSTOFFEN.
SO ZENTRALBL BAKTERIOL ORIG B. 162. 1-2. P225-32. JUL 76.
LG GE.
MJ BACTERIA: ME.
MN ANTHRACENES: ME. BIODEGRADATION. CHRYSENES: ME. OXYGEN-CONSUMPTION. ME.
AN M 77061971. 7703.

<468>

AU GROF, O.
IN USTAV VYZK. RUD PRAHA. OSTRAVA. CZECH.
YR 72.
TI DETERMINATION OF CYANIDE CONCENTRATION BY CRYSTAL ELECTRODE.
SO VOD. HOSPOD. B. 22. P41-5. 1972.
LG CZ.
DE CYANIDE DETN WATER. SILVER IODIDE ELECTRODE CYANIDE DETN.
AN C 07908045572.

<469>

AU GRUIA, E. MARIN, V.
IN RES. DES. INST. WATER RESOUR. ENG. BUCHAREST. ROM.
YR 74.
TI EFFECT OF SOME TOXIC AND INHIBITORY SUBSTANCES ON BOD KINETICS.

SO STUD. PROT. CALITATII APELOR. 16. P36-56. 1974.
LG RO.
DE CYANIDE TOXICITY BOD EVALUATION. DICHROMATE TOXICITY BOD. PHENOL TOXICITY BOD. GAS OIL TOXICITY BOD.
AN C 08502009935.

<470>

AU GRULA, M. M. GRULA, E. A.
IN ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, BARTLESVILLE, OKLA. BARTLESVILLE ENERGY RESEARCH CENTER. 9501078.
YR 76. 61P.
TI FEASIBILITY OF MICROBIAL DECOMPOSITION OF ORGANIC WASTES UNDER CONDITIONS EXISTING IN DEEP WELLS.
PR PC$4.50/MF$3.00.
AB WE ATTEMPTED TO DETERMINE IF BIODEGRADATION OF ORGANIC COMPOUNDS WOULD TAKE PLACE AT TEMPERATURES (50 EXP 0 -70 EXP 0 C) AND PRESSURES (100 ATM) OCCURRING IN DEEP DISPOSAL WELLS. UNDER AEROBIC CONDITIONS, TEMPERATURE IS NOT A CONSTRAINT; THERMOPHILIC BACTERIA DECOMPOSING A WIDE VARIETY OF COMPOUNDS ARE READILY OBTAINED FROM ORDINARY SOIL. THERMOPHILIC CULTURES DEGRADING PROPIONIC, BUTYRIC, CROTONIC, TIGLIC, SUCCINIC, AND ADIPIC ACIDS; ETHANOL, 2-PROPANOL, 1-BUTANOL, AND 2-BUTANOL; N-BUTYL AMINE, BENZOIC ACID, P-NITROBENZOIC ACID, PHENOL, MANDELIC ACID, ACETAMIDE, PROPIONAMIDE, AND ISO-OCTANE WERE OBTAINED. POSSIBLE, BUT UNCONFIRMED, THERMOPHILIC GROWTH WAS OBTAINED WITH VINYL ACETIC ACID, VALERIC ACID, HEXAMETHYLENE DIAMINE, AND P-AMINO BENZOIC ACID. NEGATIVE RESULTS: ACRYLIC ACID, 2-NITROETHANOL, 2-NITRO-1-PROPANOL, 3-NITRO-2-BUTANOL, ACETONITRILE, PROPIONITRILE, BUTYRONITRILE, P-NITROPHENOL, AND PHTHALIC ACID. AT 37 EXP 0 CULTURES UTILIZING VINYL ACETIC ACID, PROPIONITRILE, BUTYRONITRILE, ND P-AMINO BENZOIC ACID WERE OBTAINED. ACRYLIC ACID, THE NITRO ALCOHOLS, P-NITROPHENOL, ACETONITRILE, AND PHTHALIC ACID WERE NEGATIVE. MIXED CULTURES WERE MORE EFFICIENT BIODEGRADERS THAN PURE CULTURES. ALL THERMOPHILIC PURE CULTURES REQUIRED, FOR HEAVY RAPID GROWTH, ONE OR MORE FACTORS AT THE LEVELS FOUND IN 0.8 PERCENT ENZYME-HYDROLYZED CASEIN (NUTRITIONAL BIOCHEMICALS). CASEIN COULD NOT BE REPLACED BY 18 AMINO ACIDS, 8 B VITAMINS, CA EXP ++ ION, OR MN EXP ++ ION. (ERA CITATION 01: 014543).
MJ BACTERIA, ORGANIC-COMPOUNDS, WASTES.
MN BIOCHEMICAL-REACTION-KINETICS, BIODEGRADATION, OXYGEN, PRESSURE-DEPENDENCE, TEMPERATURE-DEPENDENCE, WASTE-DISPOSAL, WELLS.
ID ERDA-550200, MICROBIAL- DEGRADATION, NTISERDA.
AN N BERC/RI-76/6.

<471>

AU GRUND, ALAN. SHAPIRO, JAMES. FENNEWALD, MICHAEL. BACHA, PATRICIA. LEAHY, JOHN. MARKBREITER, KEITH. NIEDER, MATTHEW. TOEPFER, MELANY .
IN DEP. MICROBIOL. UNIV. CHICAGO. CHICAGO. ILL.
YR 75.
TI REGULATION OF ALKANE OXIDATION IN PSEUDOMONAS PUTIDA.
SO J. BACTERIOL. 123. P546-56. 1975.
LG EN.
DE ALKANE OXIDN PSEUDOMONAS PLASMID. ALC DEHYDROGENASE PSEUDOMONAS ALKANE. ALDEHYDE DEHYDROGENASE PSEUDOMONAS ALKANE.
AN C 08317144297.

<472>

AU GRUSHKO YA M. KOZHOVA O M. STOM D I.
YR 75.
TI KRAFT MILL WASTES AND THEIR TOXICITY FOR AQUATIC ORGANISMS.
SO GIDROBIOL ZH. 11 (5). (RECD 1976) 118-125.
DE DAPHNIA FISH MINNOW GUPPY CARP PERCH ROACH TROUT SALMON RAINBOW TROUT PHENOLIC COMPOUNDS.
AN B 62034722.

<473>

AU GUARINO A M. RIECK G. ARNOLD S. FENSTERMACHER P. BEND J. KNUTSON M J. ANDERSON J B.
TI DISTRIBUTION AND TOXICITY OF SELECTED WATER POLLUTANTS IN THE SPINY DOGFISH SQUALUS-ACANTHIAS.
SO BULL MT DESERT ISL BIOL LAB. 16. 1976 (1977) 50-53.
DE CENTRAL NERVOUS SYSTEM GILLS BLOOD URINE LIVER PHENOL OCTANE.
AN B 78028196.

<474>

AU GUBERGRITS, M.
YR 75. 4P.
TI MECHANISMS OF NATURAL AND FORCED DEGRADATION OF CARCINOGENIC AND TOXIC POLLUTANTS DISCHARGED INTO WATER BODIES.
AV TRANSLATED BY M. GERRARD FROM VODN. RESUR. 3 P185-188 1975.
PR PC A02/MF A01.
AB GENERALIZATIONS IN THE FIELD OF DEGRADATION OF CARCINOGENIC POLYCYCLIC AROMATIC HYDROCARBONS (PAU), IN PARTICULAR THEIR TYPICAL EXAMPLE 3,4-BENZOPYRENE (BP) ARE PRESENTED. THESE PROCESSES WHICH OCCUR UNDER CONDITIONS OF WATER RESERVOIRS AS A RESULT OF THE ACTION OF A NUMBER OF PHYSICOCHEMICAL AND/OR BIOLOGICAL AGENTS ARE EXAMINED WITHIN THE FRAMEWORK OF SOLUTION OF TWO PROBLEMS--INTERNAL AND EXTERNAL. AMONG THE FIRST OF THESE ARE THE PROCESS OF DEGRADATION OF BP DISSOLVED IN ORGANIC LIQUIDS OR POLLUTION CARRIERS (PETROLEUM PRODUCTS FROM PROCESSING OF LIQUID AND SOLID FUELS, ETC.), WHICH FORM A SOLID FILM ON THE SURFACE OF THE WATER OR SOMEWHAT HOMOGENEOUS INCLUSIONS IN ITS DEPTHS. AMONG THE EXTERNAL PROBLEMS WE EXAMINE THE CONVERSION OF BP DISSOLVED DIRECTLY IN THE WATER. (ERA CITATION 02: 003865).
MJ BENZOPYRENE, BIODEGRADATION, WATER-POLLUTION.
MN BIOCHEMICAL-REACTION-KINETICS, BIOLOGICAL-RECOVERY, CHEMICAL-EFFLUENTS, FRESH-WATER, ORGANIC-COMPOUNDS, SEAWATER.
ID ERDA-520200, ERDA-020900, TRANSLATIONS, USSR, DECOMPOSITION, AROMATIC-POLYCYCLIC-HYDROCARBONS, NTISERDAT.
AN N ORNL-TR-4191(DRAFT).

<475>

AU GUBERGRITS, M. HANNUS, M. BRODSKAYA, B. KH. KIRSO, U. PAALME, L.
IN INST. KHIM. TALLINN. USSR.
YR 75.
TI USE OF PROCESSES FOR ACTIVATED OXIDATIVE DEGRADATION OF BENZO(A)PYRENE IN WATER.
SO MATER. VSES. NAUCHN. SIMP. SOVREM. PROBL. SAMOOCHISHCHENIYA REGUL. KACH. VODY, 5TH. 6. P109. 1975.
LG RS.
AV VEL'NER, KH. A.
DE BENZOPYRENE DEGRDN WATER SILT. BIOCHEM DEGRDN BENZOPYRENE WATER.
AN C 08526197646.

<476>

AU GUBERGRITS, M. PAALME, L. KIRSO, U.
IN USSR.
YR 72.
TI DEGRADATION OF BENZO(A)PYRENE AND PHENOL UNDER THE EFFECT OF PHYSICOCHEMICAL AGENTS DURING SELF-PURIFICATION OF RESERVOIRS.
SO VOP. PROFIL. ZAGRYAZNENIYA VNESH. SREDY, CHASTNOSTI VODOEMOV, KANTSEROGEN. VESHCHESTVAMI. P49-53. 1972.
LG RS.
DE PHENOL RESERVOIR WATER SELF PURIFN. BENZOPYRENE RESERVOIR WATER SELF PURIFN.
AN C 07904023344.

<477>

AU GUDZENKO, V. I. PODREZOVA, T. N.
IN USSR.
YR 72.
TI PREPARATION OF 1,4- NAPHTHOQUINONE BY THE HETEROGENEOUS OXIDATION OF NAPHTHALENE IN AN AQUEOUS MEDIUM.
SO KHIM. PROM. (MOSCOW). 48. P153- 4. 1972.
LG RS.
DE NAPHTHOQUINONE. OXIDN NAPHTHALENE.
AN C 07623140290.

<478>

AU GUERRA M. COMODO N.
TI EVALUATION OF TOLERANCE LIMITS OF SOME TOXIC SUBSTANCES IN INDUSTRIAL WASTE WATERS BY THE ICHTHYO TOXICITY TEST.
SO BOLL SOC ITAL BIOL SPER. 48 (22). 1972 (1973) (RECD 1974) 898- 901.
DE ALBURNUS-ALBIDUS SALMO-IRIDEUS CARASSIUS-AURATUS PERMISSIBLE LIMITS MERCURY CHLORIDE POTASSIUM BI CHROMATE AMMONIA PHENOL DDT ALKYL BENZENESULFONATE.
AN B 58023037.

<479>

AU GUESTEN, H. SCHWEER, K. H. STIEGLITZ, L.
IN INST. RADIOCHEM. KERNFORSCHUNGSZENT. KARLSRUHE. KARLSRUHE. GER.

YR 74.
TI IDENTIFICATION OF NONBIODEGRADABLE ORGANIC POLLUTANTS IN RIVER WATER .
SO ARH. HIG. RADA TOKSIKOL. 25. P207-12. 1974.
LG EN.
DE ORG POLLUTANT RHINE RIVER. CHLORINATED HYDROCARBON RHINE RIVER. NITROAROM COMPD RHINE RIVER. AROM ETHER RHINE RIVER. PHTHALIC ACID ESTER RHINE RIVER. PHENOL RHINE RIVER.
AN C 08210064016.

<480>

AU GUESTEN, H. STIEGLITZ, L. SCHWEER, K -H. KOELLE, W.
IN KERNFORSCHUNGSZENTRUM KARLSRUHE, INSTITUT FUER RADIOCHEMIE, POSTFACH 3640, 75 KARLSRUHE 1, FRG.
YR 73.
TI ANTIOXIDANTS, A NEW CLASS OF ENVIRONMENTAL CONTAMINANTS.
SO ENVIRONMENTAL LETTERS, 5(4): 209-213, 1973.
LG EN.
AB NONE.
ID PHENOLIC ANTIOXIDANTS.
DE WATER POLLUTANTS, RHINE RIVER, WATER SAMPLING, AROMATIC COMPOUNDS.
AN P 7403290.

<481>

AU GUIGUES, FREDERIC.
YR 69.
TI TREATMENT AND CONTROL OF WATERS POLLUTED BY HYDROCARBONS. TESTING OF A T.P.S. SEPARATOR WITH INCLINED CORRUGATED PLATES-C.P.I.-T.P.S.
SO TECH. EAU ASSAINISSEMENT. NO. 273. P35-44; NO. 274, 49-57. 1969.
LG FR.
DE HYDROCARBONS DETN INDUSTRIAL WATERS. INDUSTRIAL WATERS HYDROCARBONS DETN. DUSTS SAMPLING. CARBON MONOXIDE DETN FACTORIES. OZONE DETN FACTORIES.
AN C 07226136126.

<482>

AU GUSEVA, A. N. PARNOV, YE. I.
IN ARMY MEDICAL INTELLIGENCE AND INFORMATION AGENCY WASHINGTON D C. 409112.
YR 76. 5P.
TI THE SOLUBILITY OF SEVERAL AROMATIC HYDROCARBONS IN WATER.
NT TRANS. OF REPORT FROM VESTNUK MOSK. UNIV. SER. II KHIM (USSR) V18 N1 P76-78 1963.
PR PC$3.50/MF$3.00.
AB IN ORDER TO SOLVE A NUMBER OF THEORETICAL PROBLEMS IN PETROLEUM GEOLOGY, FOR EXAMPLE, THE FORMATION AND DISINTEGRATION OF AGGLOMERATES, AS WELL AS CERTAIN PRACTICAL PROBLEMS IN THE AREA OF PETROLEUM REFINING, WATER POLLUTION, ETC. INFORMATION IS NEEDED REGARDING THE SOLUBILITY OF HYDROCARBONS IN VARIOUS TYPES OF NATURAL SOLUTIONS UNDER VARIOUS CONDITIONS. EXISTING LITERATURE DATA ON THE SOLUBILITY OF HYDROCARBONS, EVEN IN PURE WATER, ARE QUITE MEAGER. THERE IS ESPECIALLY LITTLE MATERIAL ON THE SOLUBILITY OF HYDROCARBONS IN WATER AT THE HIGH TEMPERATURES WHICH CAN OCCUR AT GREAT DEPTHS. IN THE STUDY REPORTED HERE BENZENE, TOLUENE, O-XYLENE, M-XYLENE, N-XYLENE AND MESITYLENE WERE USED; THE CRITERION OF PURITY WAS THE INDEX OF REFRACTION. ESPECIALLY PURE WATER WAS OBTAINED BY PASSING A DOUBLE DISTILLATE THROUGH A FILTER WITH A 'MIXED' LAYER CONSISTING OF ION-EXCHANGE RESINS EDE-10P AND KU-2. THE SOLUBILITIES OF THE AROMATIC HYDROCARBONS IN WATER WAS DETERMINED IN SEALED AMPULES BY THE POLYTHERMIC METHOD. AS IS EVIDENT FROM GRAPHS, THE SOLUBILITY CURVES HAVE AN EXTREMELY SIMILAR CHARACTER, WITH THE EXCEPTION OF BENZENE WHOSE CURVE SHAPE IS SLIGHTLY DIFFERENT FROM THE OTHER HYDROCARBONS. THE SOLUBILITY OF HYDROCARBONS INCREASES INTENSELY WITH TEMPERATURE AND DECREASES AS THE NUMBER OF METHYL GROUPS IN THE MOLECULE IS INCREASED. AS THE CRITICAL POINT IS APPROACHED THE CURVES OF DIFFERENT HYDROCARBONS SHOW A TENDENCY TO CONVERGE, AS WITH INCREASE OF TEMPERATURE THE SOLUBILITY DEPENDS ALL THE MORE ON THE STRUCTURAL PROPERTIES OF THE WATER. ALSO THE ROLE OF THE STRUCTURE OF HYDROCARBON MOLECULES, INCLUDING THE NUMBER AND LOCATION OF METHYL GROUPS, IS INCREASINGLY WEAKER.
MJ HYDROCARBONS, SOLUBILITY, WATER, AROMATIC-COMPOUNDS, BENZENE, BENZENE-COMPOUNDS.
MN XYLENES, TOLUENES, METHYL- RADICALS, HIGH-TEMPERATURE, USSR, TRANSLATIONS, REVIEWS, MOLECULAR-STRUCTURE, TEMPERATURE, GRAPHS.
ID NTISDODXA.

AN N AD-A029 649/1SL.

<483>
AU GUTKNECHT, W. F. GUILBAULT, G. G.
IN DEP. CHEM. LOUISIANA STATE UNIV. NEW ORLEANS. LA.
YR 71.
TI ELECTROCHEMICAL SYSTEM FOR MONITORING THE REMOVAL OF CYANIDE FROM AQUEOUS SYSTEMS WITH IMMOBILIZED INJECTASE.
SO ENVIRON. LETT. 2. P51-7. 1971.
LG EN.
DE INJECTASE CYANIDE REMOVAL. MONITORING CYANIDE POLLUTED WATER.
AN C 07618103512.

<484>
AU HACKEMACK, DIETRICH.
IN ICI-SPALTANLAGEN SPEYER. SPEYER. GER.
YR 71.
TI ANALYSIS AND TREATMENT OF AQUEOUS CONDENSATES FROM ICI (IMPERIAL CHEMICAL INDUSTRIES)- PROCESS REFORMING PLANTS PRODUCING CITY GAS.
SO GAS- WASSERFACH, GAS - ERDGAS. 112. P192-7. 1971.
LG GE.
DE ACETIC ACID GASOLINE CONDENSATE. PROPIONIC ACID GASOLINE CONDENSATE. BUTYRIC ACID GASOLINE CONDENSATE. ISOBUTYRIC ACID GASOLINE CONDENSATE . GASOLINE REFORMING FUEL GAS. CORROSION CONDENSATE GASOLINE REFORMING. ACIDS GASOLINE CONDENSATE. ALCS GASOLINE CONDENSATE. METHANOL GASOLINE CONDENSATE. ETHANOL GASOLINE CONDENSATE.
AN C 07426144051.

<485>
AU HAGIHARA, KOHICHI.
IN INST. PUBLIC HEALTH. TOKYO. JAPAN.
YR 72.
TI WATER ANALYSIS. DETERMINATION OF PHENOL AND ITS DERIVATIVES.
SO KOGAI BUNSEKI SHISHIN. 5. P59- 67. 1972.
LG JA.
DE REVIEW PHENOL DETN WATER.
AN C 08204021480.

<486>
AU HAINES J R. ALEXANDER M.
YR 75.
TI MICROBIAL DEGRADATION OF POLY ETHYLENE GLYCOLS.
SO APPL MICROBIOL. 29 (5). 621-625.
DE PSEUDOMONAS-AERUGINOSA ENZYME.
AN B 60031137.

<487>
AU HAKUTA, TOSHIKATSU.
IN NATL. CHEM. LAB. IND. TOKYO. JAPAN.
YR 75.
TI VAPOR-LIQUID EQUILIBRIUMS OF POLLUTANTS IN SEA WATER. II. VAPOR-LIQUID EQUILIBRIUMS OF PHENOLIC SUBSTANCE-WATER SYSTEMS.
SO NIPPON KAISUI GAKKAI-SHI. 28. P379-85. 1975.
LG JA.
DE PHENOL SEA WATER POLLUTION. VAPOR LIQ EQUIL PHENOL.
AN C 08418126558.

<488>
AU HAKUTA, TOSHIKATSU. NEGISHI, AKIRA. GOTO, TOTARO.
IN NATL. CHEM. INST. IND. TOKYO. JAPAN.
YR 76.
TI VAPOR-LIQUID EQUILIBRIUM OF SOME POLLUTING MATERIALS IN SEA WATER.
SO NIPPON KAISUI GAKKAI-SHI. 29. P247-54. 1976.
LG JA.
DE SEAWATER POLLUTANT VOLATILE EQUIL. ACETONE SEAWATER EQUIL. ALC SEAWATER EQUIL. NITROUS ACID SEAWATER EQUIL. ALKYLBENZENESULFONATE SEAWATER EQUIL. HYDROGEN CYANIDE SEAWATER EQUIL.
AN C 08618126896.

<489>
AU HALL, R. W. JR. PLUMB, R. H. JR. THORNTON, K. W. ELEY, R. L. LESSEM, A. S.
IN ARMY ENG. WATERW. EXP. STN. VICKSBURG. MISS.
YR 77.
TI ARCADIA LAKE WATER-QUALITY EVALUATION.
PG 324 PP.
LG EN.
DE LAKE QUALITY POLLUTION MODEL STD. PHENOL POLLUTION LAKE QUALITY. PESTICIDE POLLUTION LAKE QUALITY. METAL POLLUTION LAKE QUALITY. NUTRIENT POLLUTION LAKE QUALITY.
AN C 08724189033.

<490>
AU HAMMER K D. LIEMANN F.
IN INSTITUT FUR ORGANISCHE CHEMIE UND BIOCHEMIE, UNIVERSITAT HAMBURG.
YR 76.
TI PRIMARY OXIDATION MECHANISMS IN DEGRADATION OF ALIPHATIC HYDROCARBONS BY BACTERIAL ENZYME SYSTEMS (AUTHOR'S TRANSL).
TR PRIMARE OXYDATIONSMECHANISMEN BEIM ABBAU ALIPHATISCHER KOHLENWASSERSTOFFE DURCH BAKTERIELLE ENZYMSYSTEME.
SO ZENTRALBL BAKTERIOL ORIG B. 162. 1-2. P169-79. JUL 76.
LG GE.
MJ ALKANES: ME.
MN ALCOHOL-OXIDOREDUCTASES: ME. CYANIDES: PD. ME. MULTIENZYME-COMPLEXES: ME. WATER-MICROBIOLOGY.
AN M 77061960. 7703.

<491>
AU HANSEN H P.
YR 75.
TI PHOTOCHEMICAL DEGRADATION OF PETROLEUM HYDRO CARBON SURFACE FILMS ON SEA WATER.
SO MAR CHEM. 3 (3). 183-196.
DE LIGHT ALIPHATIC ACIDS AROMATIC ACIDS ALCOHOLS PHENOLS.
AN B 61001518.

<492>
AU HANSEN, DAVID J.
IN ENVIRON. RES. LAB. EPA. GULF BREEZE. FLA.
YR 76.
TI TECHNIQUES TO ASSESS THE EFFECTS OF TOXIC ORGANICS ON MARINE ORGANISMS.
PG 63-76.
LG EN.
DE MARINE ORGANISM BIOASSAY TOXICITY. WATER POLLUTION MARINE ORGANISM. BIPHENYL POLYCHLORO MARINE TOXICITY. INSECTICIDE WATER POLLUTION TOXICITY.
AN C 08523172392.

<493>
AU HANSON, RAY L. VANDERBORGH, N. E. BROOKINS, DOUGLAS G.
IN DEP. CHEM. UNIV. NEW MEXICO. ALBUQUERQUE. N. MEX.
YR 75.
TI CHARACTERIZATION OF OIL SHALES BY LASER PYROLYSIS-GAS CHROMATOGRAPHY .
SO ANAL. CHEM. 47. P335-8. 1975.
LG EN.
DE OIL SHALE CHARACTERIZATION. LASER RADIATION SHALE CHARACTERIZATION. HYDROCARBON DETN OIL SHALE. WATER DETN OIL SHALE. ACETYLENE OIL SHALE CHARACTERIZATION. PYROLYSIS OIL SHALE CHARACTERIZATION.
AN C 08214088333.

<494>
AU HANUSKA L.
YR 72.
TI AEROGENIC POLLUTION OF INTERNAL WATERS.
SO SLADECEK, V. (ED.). INTERNATIONALE VEREINIGUNG FUR THEORETISCHE UND ANGEWANDTE LIMNOLOGIE. INTERNATIONAL ASSOCIATION OF THEORETICAL AND APPLIED LIMNOLOGY. ASSOCIATION INTERNATIONALE DE LIMNOLOGIE THEOREQUE ET APPLIQUEE. VOL. 18, PARTS 1 & 2. VERHANDLUNGEN, PROCEEDINGS. TRAVAUX. LENINGRAD, USSR, 1971. 562P. (PART 1). ILLUS. MAPS. 694P. (PART 2). ILLUS MAPS. E. SCHWEIZERBART'SCHE VERLAGSBUCHHANDLUNG: STUTTGART, WEST GERMANY; (DIST. IN U.S.A. BY JOHN WILEY & SONS, INC. NEW YORK, N.Y.). (RECD 1973) 968-980.
DE FISH FROG DEATH ALDRIN INSECTICIDE BENZO PYRENE SULFUR DI OXIDE ASH HAMR RESERVOIR ORE MOUNTAINS CZECHOSLOVAKIA.
AN B 73066273.

<495>
AU HARADA, KATSUHIKO.
IN SHIMONOSEKI UNIV. FISH. SHIMONOSEKI. JAPAN.
YR 75.
TI ENZYME SYSTEM CATALYZING THE FORMATION OF FORMALDEHYDE AND DIMETHYLAMINE IN TISSUES OF FISH AND SHELLFISH.
SO SUISAN DAIGAKKO KENKYU HOKOKU. 23. P163-241. 1975.
LG JA.
DE REVIEW FORMALDEHYDE FORMATION FISH. METHYLAMINE FORMATION SHELLFISH REVIEW.
AN C 08309075670.

<496>
AU HARADA, KATSUHIKO. MIURA, SHIGETSUGU. SHINODA, YOSHIO. YAMADA, KINJIRO.
IN SHIMONOSEKI UNIV. FISH. SHIMONOSEKI.

JAPAN.
YR 70.
TI THIN-LAYER CHROMATOGRAPHIC IDENTIFICATION OF FORMALDEHYDE IN AQUATIC ANIMALS.
SO NIPPON SUISAN GAKKAISHI. 36. P189-91. 1970.
LG JA.
DE THIN LAYER CHROMATOG FORMALDEHYDE. FORMALDEHYDE THIN LAYER CHROMATOG . CHROMATOG THIN LAYER FORMALDEHYDE.
AN C 07223118313.

<497>
AU HARBOUR J R. TOLLIN G.
YR 74.
TI ESR EVIDENCE FOR CHLOROPHYLL PHOTO SENSITIZED 1 ELECTRON OXIDATION OF WATER BY BENZO QUINONE.
SO PHOTOCHEM PHOTOBIOL. 20 (3). 271-277.
DE QUINONE RADICAL FORMATION OXYGEN FORMATION ALCOHOLS PHEOPHYTIN BACTERIO CHLOROPHYLL COLD RED LIGHT DEUTERIUM LABELING.
AN B 59010603.

<498>
AU HARDER W. ATTWOOD M M.
IN DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF GRONINGEN, HAREN (GR.), THE NETHERLANDS.
YR 75.
TI OXIDATION OF ORGANIC C1 COMPOUNDS BY HYPHOMICROBIUM SPP.
SO ANTONIE VAN LEEUWENHOEK. 41. 4. P421-9. 1975.
LG EN.
MJ BACTERIA: ME.
MN ALCOHOL-OXIDOREDUCTASES: ME. OXYGEN-CONSUMPTION.
AN M 76159455. 7607.

<499>
AU HARKNESS A C. MURRAY F E.
YR 70.
TI OXIDATION OF METHYL MERCAPTAN WITH MOLECULAR OXYGEN IN AQUEOUS SOLUTION.
SO ATMOS ENVIRON. 4 (4). 417-424.
AN B 52039953.

<500>
AU HARRIS R P. BERDUGO V. O'HARA S C M. CORNER E D S.
IN MAR. BIOL. ASSOC. UK, LAB. CITADEL HILL, PLYMOUTH PL1 2PB, DEVONS. ENGL. UK.
YR 77.
TI ACCUMULATION OF CARBON-14 1 NAPHTHALENE BY AN OCEANIC AND AN ESTUARINE COPEPOD DURING LONG-TERM EXPOSURE TO LOW LEVEL CONCENTRATIONS.
SO MAR BIOL (BERL). 42 (3). 187-196.
LG EN.
DE CALANUS-HELGOLANDICUS EURYTEMORA-AFFINIS FOOD CHAIN.
AN B 65018086.

<501>
AU HARRISON R M. PERRY R. WELLINGS R A.
YR 76.
TI CHEMICAL KINETICS OF CHLORINATION OF SOME POLY NUCLEAR AROMATIC HYDRO CARBONS UNDER CONDITIONS OF WATER TREATMENT PROCESSES.
SO ENVIRON SCI TECHNOL. 10 (12). 1156-1160.
DE PYRENE BENZO-GHI-PERYLENE POLLUTION.
AN B 63029520.

<502>
AU HARRISON R M. PERRY R. WELLINGS R A.
YR 76.
TI EFFECT OF WATER CHLORINATION UPON LEVELS OF SOME POLY NUCLEAR AROMATIC HYDRO CARBONS IN WATER.
SO ENVIRON SCI TECHNOL. 10 (12). 1151-1156.
DE FLUORANTHENE PYRENE BENZ A ANTHRACENE BENZO K FLUORANTHENE BENZO A PYRENE PERYLENE INDENO-1 2 3- CD-PYRENE BENZO-GHI-PERYLENE POLLUTION WATER TREATMENT.
AN B 63029518.

<503>
AU HASS B S. APPLEGATE H G.
IN DEPARTMENT OF BIOCHEMISTRY AND BIOPHYSICS, TEXAS A AND M UNIVERSITY, COLLEGE STATION, TEX. 77843.
YR 75.
TI THE EFFECTS OF UNSUBSTITUTED POLYCYCLIC AROMATIC HYDROCARBONS ON THE GROWTH OF ESCHERICHIA COLI.
SO CHEM BIOL INTERACT. 10. 4. P265- 8. APR 75.
LG EN.
MJ ESCHERICHIA-COLI: ME. (E-COLI).
MN BENZANTHRACENES: PD. ESCHERICHIA-COLI: DE, E-COLI. STRUCTURE-

ACTIVITY-RELATIONSHIP. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 75129502.

<504>
AU HEALY J. B. JR. YOUNG L Y.
IN DEPARTMENT OF CIVIL ENGINEERING, STANFORD UNIVERSITY, STANFORD, CALIFORNIA.
YR 78.
TI CATECHOL AND PHENOL DEGRADATION BY A METHANOGENIC POPULATION OF BACTERIA.
SO APPL ENVIRON MICROBIOL. 35. 1. P216-8. JAN 78.
LG EN.
MJ BACTERIA: ME.
MN ADAPTATION-PHYSIOLOGICAL. CARBON-DIOXIDE: BI. (NON-NIH-SUP).
AN M 78101794. 7805.

<505>
AU HELLMANN, HUBERT.
IN BUNDESANST. GEWAESSERKD. KOBLENZ. GER.
YR 71.
TI DETERMINATION OF PARAFFINS IN WATERS. RESULTS OF IR SPECTROSCOPY AND GAS CHROMATOGRAPHY.
SO DEUT. GEWAESSERK. MITT. 15. P139-43. 1971.
LG GE.
DE PARAFFIN SPECTROSCOPY RHINE. CHROMATOG PARAFFIN RHINE. HYDROCARBON DETN RHINE.
AN C 07608037267.

<506>
AU HENDRICKSON, THOMAS N. DAIGNAULT, LOUIS G.
IN BERKEY FILM PROCESSING OF N.E. FITCHBURG, MASS.
YR 73. 160P.
TI TREATMENT OF COMPLEX CYANIDE COMPOUNDS FOR REUSE OR DISPOSAL.
AV 73-269.
PR PC-GPO/MF$1.45-NTIS.
AB COMPLEX CYANIDES (FERRO-AND FERRICYANIDE) IN INDUSTRIAL WASTE WATER EFFLUENTS IMPOSE A DIRECT THREAT UPON THE ENVIRONMENT. METHODS TO RECOVER OR DESTROY THESE COMPOUNDS WERE EVALUATED IN LABORATORY STUDIES. THE TECHNIQUES TESTED INCLUDE ELECTROLYSIS, OZONATION, CHLORINATION AND HEAVY METAL ION PRECIPITATION. THE STUDY WAS CONDUCTED TO DETERMINE THE FEASIBILITY OF USING ONE OR MORE OF THESE METHODS TO REDUCE THE CONCENTRATION OF FERRICYANIDE IN BOTH CONCENTRATED (10,000 TO 100,000 MG/L) AND DILUTE (10 TO 100 MG/L) WASTE EFFLUENTS. A PROCESS FOR TREATING OVERFLOW PHOTOGRAPHIC COLOR PROCESS BLEACHES IS DESCRIBED. (MODIFIED AUTHOR ABSTRACT).
MJ CYANIDES, INDUSTRIAL-WASTE-TREATMENT, IRON-CYANIDES, INDUSTRIAL-WASTE-TREATMENT, WATER-POLLUTION, CYANIDES, PHOTOGRAPHIC-PROCESSING-CHEMICALS, INDUSTRIAL-WASTE-TREATMENT.
MN ELECTROLYSIS, OZONIZATION, CHLORINATION, OXIDATION, PRECIPITATION-CHEMISTRY.
ID WATER-POLLUTION-CONTROL, ORM.
AN N PB-222 794/0.

<507>
AU HENNEQUIN, CLAUDE.
IN INST. NAT. RECH. CHIM. APPL. CENTRE RECH. VERT-LE-PETIT. FR.
YR 70.
TI ANALYTICAL CRITERIA OF WATER POLLUTION.
SO BULL. SOC. CHIM. FR. 1. P357-64. 1970.
LG FR.
DE REVIEW ANAL WATER POLLUTION. ANAL WATER POLLUTION REVIEW. PESTICIDES POLLUTION WATER ANAL. DETERGENTS POLLUTION WATER ANAL. PHENOLICS POLLUTION WATER ANAL.
AN C 07304018315.

<508>
AU HERBES S E. BEAUCHAMP J J.
IN ENVIRONMENTAL SCIENCES DIVISION, OAK RIDGE NATIONAL LABORATORY, OAK RIDGE, TENN.
YR 77.
TI TOXIC INTERACTION OF MIXTURES OF TWO COAL CONVERSION EFFLUENT COMPONENTS (RESORCINOL AND 6- METHYLQUINOLINE) TO DAPHNIA MAGNA.
SO BULL ENVIRON CONTAM TOXICOL. 17. 1. P25-32. JAN 77.
LG EN.
MJ COAL. TO.
MN ANIMAL. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 77112966. 7706.

<509>

AU HERBES S E. SCHWALL L R. WILLIAMS G A.
IN ENVIRONMENTAL SCIENCES DIVISION, OAK RIDGE NATIONAL LABORATORY, OAK RIDGE, TENNESSEE.
YR 77.
TI RATE OF MICROBIAL TRANSFORMATION OF POLYCYCLIC AROMATIC HYDROCARBONS: A CHROMATOGRAPHIC QUANTIFICATION PROCEDURE.
SO APPL ENVIRON MICROBIOL. 34. 2. P244-6. AUG 77.
LG EN.
MJ BACTERIA: ME. SOIL-MICROBIOLOGY.
MN ANTHRACENES: ME. NAPHTHALENES: ME.
AN M 73018714. 7801.

<510>

AU HERBES, S. E.
IN ENVIRON. SCI. DIV. OAK RIDGE NATL. LAB. OAK RIDGE. TENN.
YR 77.
TI PARTITIONING OF POLYCYCLIC AROMATIC HYDROCARBONS BETWEEN DISSOLVED AND PARTICULATE PHASES IN NATURAL WATERS.
SO WATER RES. 11. P493-6. 1977.
LG EN.
DE POLYCYCLIC AROM HYDROCARBON WATER. POLLUTION WATER POLYCYCLIC HYDROCARBON. ANTHRACENE ADSORPTION YEAST.
AN C 08722172526.

<511>

AU HERBES, S. E. SOUTHWORTH, G. R. GEHRS, C. W.
IN OAK RIDGE NATIONAL LAB. TENN. ADMINISTRATION. 4832000.
YR 76. 20P.
TI ORGANIC CONTAMINANTS IN AQUEOUS COAL CONVERSION EFFLUENTS: ENVIRONMENTAL CONSEQUENCES AND RESEARCH PRIORITIES.
NT 10TH. ANNUAL CONFERENCE ON TRACE SUBSTANCES IN ENVIRONMENTAL HEALTH, COLUMBIA, MISSOURI, UNITED STATES OF AMERICA (USA), 8 JUN 1976.
PR PC A02/MF A01.
AB THE ANTICIPATED IMPLEMENTATION OF AN EXTENSIVE COAL CONVERSION INDUSTRY IN THE UNITED STATES WITHIN SEVERAL DECADES WILL RESULT IN PRODUCTION OF SUBSTANTIAL QUANTITIES OF HIGHLY CONTAMINATED WASTEWATER. MANY OF THE CONTAMINANTS PRODUCED, IF RELEASED INTO NATURAL WATERS, COULD HAVE DELETERIOUS EFFECTS ON AQUATIC ECOSYSTEMS, AND ULTIMATELY, ON HUMAN LIFE. RESEARCH IS REQUIRED TO DETERMINE POTENTIAL ACUTE AND SUB-ACUTE EFFECTS OF POTENTIALLY HAZARDOUS EFFLUENTS CONSTITUENTS, AND TO EVALUATE THEIR TRANSPORT AND PERSISTENCE IN AQUATIC SYSTEMS. TO FACILITATE A RATIONAL ASSIGNMENT OF FUTURE AQUATIC RESEARCH PRIORITIES TO ANSWER THESE ISSUES, WE HAVE INITIATED A SYSTEMATIC ASSESSMENT OF THE ENVIRONMENTAL HAZARDS OF ANTICIPATED ORGANIC COMPONENTS OF AQUEOUS COAL LIQUEFACTION EFFLUENTS BY THE COMPILATION OF A CRITICAL LITERATURE REVIEW. FIVE MAJOR CLASSES OF ORGANIC COMPOUNDS HAVE BEEN OPERATIONALLY DEFINED: (1) PHENOLS; (2) ARYLAMINES (ORGANIC BASES); (3) ALIPHATIC HYDROCARBONS; (4) MONO- AND POLYCYCLIC AROMATIC HYDROCARBONS (PAH); AND (5) SULFUR-CONTAINING COMPOUNDS. A SUMMARY ASSESSMENT OF EACH CLASS IS PRESENTED ON THE BASIS OF (1) CONCENTRATIONS ANTICIPATED IN COAL LIQUEFACTION EFFLUENTS; (2) REMOVAL BY WASTEWATER TREATMENT SYSTEMS; (3) ACUTE TOXICITY; (4) CHRONIC TOXIC EFFECTS ON AQUATIC ORGANISMS; AND (5) ENVIRONMENTAL TRANSPORT AND PERSISTENCE. GAPS IN UNDERSTANDING AND FUTURE RESEARCH NEEDS ARE IDENTIFIED. (ERA CITATION 01: 022560).
MJ COAL-INDUSTRY, COAL- LIQUEFACTION, WATER-POLLUTION.
MN ALKANES, AMINES, AQUATIC-ECOSYSTEMS, AROMATICS, CONDENSED-AROMATICS, ENVIRONMENTAL-EFFECTS, FORECASTING, PHENOLS, RESEARCH-PROGRAMS, TOXICITY, TRANSPORT, USA, WASTE-PROCESSING, WASTE-WATER, WASTES.
ID ERDA-010900, ERDA-010800, ERDA-520200, ERDA-010405, NTISERDA.
AN N CONF-760632-.

<512>

AU HEREDY, LASZLO ALADAR.
IN CARNEGIE-MELLON UNIVERSITY (0041) PH.D. 1963, 001PP.
YR 63.
TI I. STUDIES ON THE CHEMISTRY AND MECHANISM OF TRANSBENZLATION. II. EXTRACTION OF BITUMINOUS COAL WITH PHENANTHRENE.
SO ADD VX1(96) P0022.
DE CHEMISTRY, GENERAL (0485).
AN D ADG02-02202.

<513>
AU HERSHBERGER, W K. JUCHAU, M R. PEDERSEN, M G.
IN UNIV. OF WASHINGTON, COLLEGE OF FISHERIES, SEATTLE, WA 98195.
YR 74.
TI METABOLISM OF 3,4-BENZPYRENE IN RAINBOW TROUT (SALMO GAIRDNERI).
SO BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, 12(4): 481-486, OCT. 1974.
LG EN.
AB NONE.
ID ARYL HYDROCARBON HYDROXYLASE.
DE AROMATIC COMPOUNDS, BIOCHEMICAL ANALYSIS, CARCINOGENESIS, ENZYMES, FISH, HISTOLOGY, METABOLISM, TOXICOLOGY.
AN P 7503529.

<514>
AU HEYER J.
IN AKADEMIE DER WISSENSCHAFTEN DER DDR, FORSCHUNGSZENTRUM FUR MOLEKULARBIOLOGIE UND MEDIZIN, ZENTRALINSTITUT FUR MIKROBIOLOGIE UND EXPERIMENTELLE THERAPIE, JENA.
YR 76.
TI MICROBIAL UTILIZATION OF ETHYLENE.
TR MIKROBIELLE VERWERTUNG VON ATHYLEN.
SO Z ALLG MIKROBIOL. 16. 8. P633-7. 1976.
LG GE.
MJ ETHYLENES: ME.
MN CARBON-DIOXIDE: BI.
AN M 77083390. 7704.

<515>
AU HIGASHIURA, MUYO.
IN OSAKA-CITY INST. IND. OSAKA. JAPAN.
YR 71.
TI ACTUAL CONDITIONS AND ANALYSES OF WASTE WATER CONTAINING CYANIDE COMPOUNDS.
SO KAGAKU TO KOGYO (OSAKA). 45. P590-602. 1971.
LG JA.
DE REVIEW CYANIDE DETN WASTE WATER.
AN C 07622131162.

<516>
AU HIGASHIURA, MUYO.
IN OSAKA MUNIC. TECH. RES. INST. OSAKA. JAPAN.
YR 71.
TI SEPARATION OF CYANIDE IN WASTE WATERS CONTAINING CYANIDE COMPOUNDS.
SO KAGAKU NO RYOIKI. 25. P926-31. 1971.
LG JA.
DE WATER WASTE SEPN CYANIDE. COMPLEX CYANO SEPN WATER. SEPN DETN CYANIDE WATER.
AN C 07604017589.

<517>
AU HIGASHIURA, MUYO.
IN OSAKA MUNIC. IND. RES. INST. OSAKA. JAPAN.
YR 70.
TI MICROANALYSES OF POLLUTANTS IN WASTE WATER. VIII. SEPARATION AND DETERMINATION OF TRACE CYANIDE IN WASTE WATER.
SO KOGYO YOSUI. NO. 141. P35-9. 1970.
LG JA.
DE CYANIDES DETN WASTE WATERS. SPECTROPHOTOMETRIC DETN CYANIDES. PYRIDINE PYRAZOLONE CYANIDES DETN. PYRAZOLONE PYRIDINE CYANIDES DETN .
AN C 07322112695.

<518>
AU HIGASHIURA, MUYO. MORI, KYOKO. NAKAGAWA, AKIRA.
IN RES. LAB. OSAKA. JAPAN.
YR 73.
TI DETERMINATION OF CYANIDE IN WASTE WATERS CONTAINING CYANOCOMPLEXES WITH ION SELECTIVE ELECTRODE.
SO KOGYO YOSUI. P26-32. 1973.
LG JA.
DE CYANIDE DETN WASTE WATER. COMPLEX CYANIDE DETN WASTE WATER. ION SELECTIVE ELECTRODE CYANIDE DETN. WATER ANALYSIS CYANIDE.
AN C 08012063623.

<519>
AU HILLE, ETELKA. VAJTA, LASZLO. SZEBENYI, IMRE.
IN KEM. TECHNOL. TANSZEK. BUDAPESTI MUSZ. EGY. BUDAPEST. HUNG.
YR 75.
TI ANALYSIS OF WASTE WATERS IN THE PETROLEUM INDUSTRY.
SO KEM. KOZL. 44. P21-34. 1975.
LG HU.
DE PETROLEUM INDUSTRY WASTEWATER ANALYSIS. PHENOL DETN PETROLEUM INDUSTRY WASTEWATER. SULFIDE DETN PETROLEUM INDUSTRY WASTEWATER. MERCAPTAN DETN PETROLEUM INDUSTRY WASTEWATER. FURFURAL DETN PETROLEUM INDUSTRY WASTEWATER. ACETONE DETN PETROLEUM INDUSTRY WASTEWATER. MONOETHANOLAMINE DETN PETROLEUM

INDUSTRY WASTEWATER. DIETHYLENE GLYCOL DETN PETROLEUM WASTEWATER. SURFACTANT PETROLEUM INDUSTRY WASTEWATER ANALYSIS.
AN C 08426184555.

<520>
AU HITES R A.
IN DEPARTMENT OF CHEMICAL ENGINEERING, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, CAMBRIDGE, MASSACHUSETTS.
YR 77.
TI THE ANALYSIS OF ORGANIC WATER POLLUTANTS BY GAS CHROMATOGRAPHY AND GAS CHROMATOGRAPHY-MASS SPECTROMETRY.
SO ADV CHROMATOGR. 15. P69-112. 1977.
LG EN.
MJ CHROMATOGRAPHY-GAS: MT. WATER-POLLUTANTS: AN.
MN GASES. MACROMOLECULAR-SYSTEMS. WATER-SUPPLY: AN.
AN M 77131393. 7706.

<521>
AU HITES R A.
YR 73.
TI ANALYSIS OF TRACE ORGANIC COMPOUNDS IN NEW ENGLAND RIVERS.
SO J CHROMATOGR SCI. 11. 11. P570- 4. NOV 73.
LG EN.
MJ INDUSTRIAL-WASTE: AN.
MN ADIPIC-ACIDS: AN. COMPUTERS-DIGITAL. MASSACHUSETTS. PHTHALIC-ACIDS: AN.
AN M 74048914.

<522>
AU HITES, RONALD A. BIEMANN, K.
IN DEP. CHEM. MASSACHUSETTS INST. TECHNOL. CAMBRIDGE. MASS.
YR 72.
TI WATER POLLUTION. ORGANIC COMPOUNDS IN THE CHARLES RIVER, BOSTON.
SO SCIENCE. 178. P158-60. 1972.
LG EN.
DE ORG COMPD CHARLES RIVER. ALKANE RIVER WATER. NAPHTHALENE RIVER WATER . ANTHRACENE RIVER WATER. PHENANTHRENE RIVER WATER. PYRENE RIVER WATER. FLUORANTHENE RIVER WATER. DIBUTYL PHTHALATE RIVER WATER. ETHYLHEXYL PHTHALATE RIVER WATER.
AN C 07726163369.

<523>
AU HO C H. CLARK B R. GUERIN M R.
YR 76.
TI DIRECT ANALYSIS OF ORGANIC COMPOUNDS IN AQUEOUS BYPRODUCTS FROM FOSSIL FUEL CONVERSION PROCESSES OIL SHALE RETORTING SYNTHANE COAL GASIFICATION AND CHAR OIL ENERGY DEVELOPMENT COAL LIQUEFACTION.
SO J ENVIRON SCI HEALTH PART A ENVIRON SCI ENG. 11 (7). 481-489.
DE WATER POLLUTION CARBOXYLIC ACIDS AMIDES CRESOLS PHENOLS NAPHTHOLS GAS CHROMATOGRAPHY.
AN B 77003377.

<524>
AU HOFTON, M.
IN RES. CENT. BR. STEEL CORP. MIDDLESBROUGH/CLEVELAND. ENGL.
YR 76.
TI CONTINUOUS DETERMINATION OF FREE CYANIDE IN EFFLUENTS USING SILVER ION SELECTIVE ELECTRODE.
SO ENVIRON. SCI. TECHNOL. 10. P277- 80. 1976.
LG EN.
DE CYANIDE MONITOR STEEL WASTEWATER. SILVER SELECTIVE ELECTRODE ANALYSIS .
AN C 08508051319.

<525>
AU HOLLADAY, D. W. HANCHER, C. W. CHILCOTE, D. D. SCOTT, C. D.
IN OAK RIDGE NATIONAL LAB. TENN. ADMINISTRATION. 4832000.
YR 76. 41P.
TI BIODEGRADATION OF PHENOLIC WASTE LIQUORS IN STIRRED-TANK, COLUMNAR, AND FLUIDIZED BED BIOREACTORS.
NT 69. ANNUAL MEETING OF THE AICHE, CHICAGO, ILLINOIS, UNITED STATES OF AMERICA (USA), 28 NOV 1976.
PR PC A03/MF A01.
AB THE BIOLOGICAL DEGRADATION OF SCRUB LIQUORS SIMILAR TO THOSE THAT ARISE IN COAL CONVERSION PROCESSES WAS STUDIED FOR SYMBIOTIC BACTERIAL POPULATIONS CONTAINED IN A CONTINUOUS STIRRED-TANK BIOREACTOR (CSTBR), A THREE-PHASE (AIR, LIQUOR, AND PACKING COATING WITH BACTERIA) PACKED-BED BIOREACTOR (PBBR), AND A THREE-PHASE FLUIDIZED BED BIOREACTOR (FBBR). THE CSTBR YIELDED CONVERSION OF THE MOST C COMPOUNDS AT THE HIGHEST CONCENTRATION DUE LARGELY TO ITS LONG RETENTION TIMES.

THE MAXIMUM CSTBR DEGRADATION RATE. Q/SUB L/(C/SUB I/ - C)/V/SUB R/, FOR 0.99 CONVERSION OF PHENOL CONCENTRATIONS UP TO 1400 MG/L WAS 2.67 G PHENOL/DAY/L REACTOR VOLUME. THE THREE-PHASE PBBR YIELDED CONVERSION OF PHENOL COMPOUNDS COMPARABLE TO THE CSTBR, BUT WITH THE ADVANTAGE OF RETENTION TIMES REDUCED TO AS LITTLE AS 1.25 HR FOR A 500 MG/L FEED, AND WITH DEGRADATION RATES OF ABOUT TWICE THOSE OF THE CSTBR. THE THREE-PHASE FBBR ACHIEVED THE HIGHEST DEGRADATION RATES AND LOWEST RETENTION TIMES. FOR A THREE-LITER TOTAL GEOMETRIC REACTOR VOLUME, A DEGRADATION RATE OF 8.3 G/DAY/L REACTOR FOR 0.99 CONVERSION OF 750 MG/L PHENOL FEED WAS OBSERVED, WHILE IN LATER EXPERIMENTS WITH THE SAME TAPERED COLUMN EXPANDED TO A 10-L VOLUME, A DEGRADATION RATE OF 11.0 G/DAY/L WAS OBSERVED FOR 0.99 CONVERSION OF A 100 MG/L PHENOL FEED. REMOVAL OF TOTAL ORGANIC C BY ALL BIOREACTORS WAS CONSISTENTLY 80-99 PERCENT FOR OPERATING CONDITIONS IN WHICH PROCESSING OF FEEDS PRODUCED 0.99 CONVERSION OF PHENOL AND PHENOL EFFLUENT CONCENTRATIONS OF 0.5-1.0 MG/L. THE EFFICIENCY OF THE FBBR WAS SUCH THAT TYPICAL PHENOL CONCENTRATIONS IN ITS EFFLUENT WERE 0.01-0.05 MG/L. PART OF THE RESIDUAL CARBON FOR EFFLUENTS FROM THE FLUIDIZED AND PACKED COLUMNAR BIOREACTORS WAS TRACED TO INEFFECTIVE THIOCYANATE CONVERSION. THE CSTBR CAPABILITY FOR THIOCYANATE CONVERSION WAS DEPENDENT ON SUFFICIENTLY LONG RETENTION TIMES. (ERA CITATION 02: 021561).

MJ PHENOLS.

MN BACTERIA, BIODEGRADATION, CHEMICAL-REACTORS, COMPARATIVE-EVALUATIONS, EFFICIENCY.

ID ERDA-010800, FLUIDIZED-BED-PROCESSORS, FOULING, LIQUID-WASTE-DISPOSAL, COLUMN-PACKINGS, COLUMNS-PROCESS-ENGINEERING, WATER-POLLUTION- CONTROL, NTISERDA.

AN N CONF-761109-4.

<526>

AU HOLST R W. YOPP J H.

YR 76.

TI AN ALGAL POLY PHENOL OXIDASE EC-1.10.3.1 CHARACTERIZATION OF THE O DI PHENOL OXIDASE FROM THE CHAROPHYTE NITELLA-MIRABILIS.

SO PHYCOLOGIA. 15 (2). 119-124.

DE MONOSTROMA-FUSCUM CRESOLASE LACCASE PH ISO ENZYME COMPLEMENT ELECTROPHORESIS CENTRIFUGATION FRESH WATER MARINE CATECHOLAMINE OXIDATION.

AN B 62045475.

<527>

AU HOPPER D J. CHAPMAN P J.

YR 71.

TI GENTISIC ACID AND ITS 3- AND 4-METHYL-SUBSTITUTED HOMOLOGUES AS INTERMEDIATES IN THE BACTERIAL DEGRADATION OF M-CRESOL, 3,5-XYLENOL AND 2,5-XYLENOL.

SO BIOCHEM J. 122. 1. P19-28. MAR 71.

LG EN.

MJ CRESOLS: ME.

MN BENZOATES: ME. ME.

AN M 72054095.

<528>

AU HORASAWA, ISAMU.

IN NIPPON KOGAI KENKYU-SHO. TOKYO. JAPAN.

YR 75.

TI WASTE WATER TREATMENT FOR WATER POLLUTION CONTROL. X.

SO YOSUI TO HAISUI. 17. P631-7. 1975.

LG JA.

DE REVIEW WASTEWATER TREATMENT. PH CONTROL WASTEWATER REVIEW. METAL HEAVY REMOVAL WASTEWATER REVIEW. PHENOL EXTN WASTEWATER REVIEW.

AN C 08420140274.

<529>

AU HORITSU, H. SUGIURA, M. TOMOEDA, M.

IN FAC. AGRIC. GIFU UNIV. GIFU. JAPAN.

YR 77.

TI STUDIES ON THE ABSORPTION OF TOXIC ORGANIC COMPOUNDS BY MICROORGANISMS. 1. BEHAVIOR OF YEASTS AND BACTERIA WITH RESPECT TO THE ABSORPTION OF BENZO(A)PYRENE.

SO HAKKO KOGAKU KAISHI. 55. P51-5. 1977.

LG JA.

DE BENZOPYRENE ABSORPTION BACTERIA YEAST.

AN C 08621151141.

<530>

AU HORN, J. A. MOYER, J. E. HALE, J.

H.
IN ROBERT S. KERR WATER RES. CENT. FED. WATER QUAL. ADM. ADA. OKLA.
YR 70.
TI BIOLOGICAL DEGRADATION OF TERTIARY BUTYL ALCOHOL.
SO ENG. BULL. PURDUE UNIV. ENG. EXT. SER. 137. P839-54. 1970.
LG EN.
DE BUTYL ALC BIODEGRDN.
AN C 07702009384.

<531>
AU HOSHIKA Y.
IN AICHI ENVIRONMENTAL RESEARCH CENTRE, 7-6, TSUJI-MACHI, KITA-KU, NAGOYA-SHI, AICHI, JAPAN.
YR 77.
TI GAS CHROMATOGRAPHIC DETERMINATION OF STYRENE AS ITS DIBROMIDE.
SO J CHROMATOGR. 136. 1. P95-103. 1 JUN 77.
LG EN.
MJ AIR-POLLUTANTS: AN. STYRENES: AN.
MN ALKALIES.
AN M 77228054. 7711.

<532>
AU HOTTA, HIROSHI. SUZUKI, NOBUTAKE. ISODA, KAZUO.
IN JAPAN AT. ENERGY RES. INST. TAKASAKI. JAPAN.
YR 69.
TI AUTOXIDATION OF AROMATIC HYDROCARBONS IN AQUEOUS SOLUTIONS. XIII. EFFECT OF ORGANIC ADDITIVES ON THE AUTOXIDATION OF BENZENE AND TOLUENE IN THE AQUEOUS PHASE AND THE KINETIC ANALYSIS.
SO BULL. CHEM. SOC. JAP. 42. P3056- 64. 1969.
LG EN.
DE AUTOXIDN AROMS AQ SOLN. AROMS AUTOXIDN AQ SOLN. KINETICS AUTOXIDN AROMS.
AN C 07207030974.

<533>
AU HOU C T. LASKIN A I.
YR 76.
TI MICROBIAL CONVERSION OF DI BENZOTHIOPHENE.
SO UNDERKOFLER, LELAND A. (ED.). DEVELOPMENTS IN INDUSTRIAL MICROBIOLOGY, VOL. 17. PROCEEDINGS OF THE THIRTY-SECOND GENERAL MEETING OF THE SOCIETY FOR INDUSTRIAL MICROBIOLOGY. KINGSTON, R.I. USA, AUG. 17-22, 1975. XI+456P. ILLUS. AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES: WASHINGTON, D.C. USA. 351-362.
DE PSEUDOMONAS-AERUGINOSA HYDRO CARBONS CARBON SOURCE DEGRADATION.
AN B 77093834.

<534>
AU HOUGHTON C. CAIN R B.
YR 72.
TI MICROBIAL METABOLISM OF THE PYRIDINE RING. FORMATION OF PYRIDINEDIOLS (DIHYDROXYPYRIDINES) AS INTERMEDIATES IN THE DEGRADATION OF PYRIDINE COMPOUNDS BY MICRO-ORGANISMS.
SO BIOCHEM J. 130. 3. P879-93. DEC 72.
LG EN.
MJ ALCALIGENES: ME.
MN AGROBACTERIUM: GD. ISOMERISM. SEWAGE.
AN M 73224968.

<535>
AU HOUSTON, CHESTER W.
IN RHODE ISLAND UNIV. KINGSTON. DEPT. OF MICROBIOLOGY.
YR 74. 33P.
TI BIOLOGICAL DEGRADATION OF HYDROCARBONS IN WATER.
NT TECHNICAL COMPLETION REPT. 1 JUL 71-30 JUN 30.
PR PC$3.25/MF$1.45.
AB THE GROWTH OF PSEUDOMONAS AERUGINOSS ON N-HEPTANE WAS FOUND TO BE EXPONENTIAL ONLY AT LOW CELL CONCENTRATIONS (1 GM/1). THE CHANGE FROM EXPONENTIAL TO LINEAR GROWTH RATE OCCURS WHEN DISSOLVED OXYGEN IS WELL ABOVE THE CRITICAL VALUE. THE DATA FIT THE MATHEMATICAL MODEL FOR HOMOGENEOUS KINETICS DEVELOPED BY DUNN IN 1958. THEY SUGGEST THAT HEPTANE IS USED IN DISSOLVED FORM RATHER THAN BY DIRECT CONTACT BETWEEN MICROORGANISM AND HYDROCARBON DROPLET. A DECREASE IN INTERFACIAL TENSION DURING GROWTH IS ATTRIBUTED TO THE PRODUCTION OF A SURFACE TENSION DEPRESSANT BY THE ORGANISM. INCREASED SOLUBILITY OF THE HYDROCARBON AS A RESULT OF ITS PRODUCTION MAY ACCOUNT FOR THE HIGH GROWTH RATE OBSERVED ON THIS SUBSTRATE OF LOW SOLUBILITY.
MJ PSEUDOMONAS, HYDROCARBONS, BIODETERIORATION.
MN GROWTH, BACTERIA, WATER- POLLUTION,

DISSOLVED-GASES, OXYGEN.
ID NTISDIOWRR.
AN N PB-233 438/1.

<536>

AU HOUSTON, CHESTER W.
IN RHODE ISLAND UNIV. KINGSTON. DEPT. OF BACTERIOLOGY.
YR 70. 34P*.
TI BIOCHEMICAL OXIDATION OF HYDROCARBONS IN NATURAL WATERS.
NT TECHNICAL COMPLETION REPT. 1 JUL 68-30 SEP 70.
PR PC$3.00 MF$0.95.
AB A STUDY OF THE KINETICS OF MICROBIAL OXIDATION OF HYDROCARBONS WAS CARRIED OUT USING A ONE ORGANISM-PURE HYDROCARBON SYSTEM (PSEUDOMONAS AERUGINOSA-HEPTANE). IN BATCH CULTURE, HEPTANE SUPPLY IS GROWTH LIMITING AT A CELL CONCENTRATION OF 3 G/L ON A DRY BASIS. THE CELL CONCENTRATION WAS INCREASED TO 8 G/L WHEN HEPTANE WAS VOLATILIZED IN THE INFLUENT AIR TO INCREASE INTERFACIAL AREA AND MASS TRANSFER. SPECIFIC GROWTH RATE IS INCREASED BY TEMPERATURE MORE THAN CAN BE ACCOUNTED FOR BY THE EFFECT OF TEMPERATURE ALONE ON GROWTH RATE. THE EFFECT IS ATTRIBUTED TO THE HIGHER SOLUBILITY OF HEPTANE AT THE HIGHER TEMPERATURE. WASH-OUT CHARACTERISTIC OF CONTINUOUS CULTURES ON HEPTANE DIFFER FROM THE THEORETICAL AND IS EXPLAINED ON THE BASIS OF MASS TRANSFER LIMITATIONS. STEADY-STATES ARE POSSIBLE AT DILUTION RATES HIGHER THAN THOSE PREDICTED FROM BATCH CULTURES. PRODUCTIVITY WAS FOUND TO BE 1.5 G/L/HR AT D=0.26 WITH A HEPTANE FEED RATE OF 18 ML/HR. LIMITATION OF MAGNESIUM OR IRON IN THE HEPTANE LIMITED CULTURES RESULTED IN A MARKED INCREASE IN HEPTANOIC ACID PRODUCTION; HEPTANE GROWTH CELLS HAD A MARKEDLY HIGHER LIPID CONTENT THAN THOSE GROWN ON GLUCOSE. (AUTHOR).
MJ WATER-POLLUTION, HYDROCARBONS, OXIDATION, HYDROCARBONS, BIODETERIORATION, HYDROCARBONS.
MN PENTANES, REACTION-KINETICS, MICROORGANISMS, CARBOXYLATION.
ID WATER-POLLUTION-CONTROL, HEPTANOIC-ACIDS.
AN N PB-197 585.

<537>

AU HOWLAND, ROBERT M.
IN FISH CONTR. LAB. BUR. OF SPORT FISH. AND WILDLIFE. LA CROSSE. WIS.
YR 69.
TI LABORATORY STUDIES ON POSSIBLE FISH-COLLECTING AIDS, WITH SOME TOXICITIES FOR THE ISOMERS OF CRESOL.
PG 34: 10 PP.
LG EN.
DE CRESOLS TOXICITY FISH. TOXICITY CRESOLS FISH. FISH COLLECTING AIDS CHEMS. QUINALDINE FISH COLLECTING.
AN C 07325128318.

<538>

AU HRUTFIORD, B F. FRIBERG, T S. WILSON, J R. WILSON, D F.
IN UNIV. OF WASHINGTON, COLLEGE OF FOREST RESOURCES, SEATTLE, WA 98195.
YR 75.
TI ORGANIC COMPOUNDS IN PULP MILL LAGOON DISCHARGE.
SO 1975 TAPPI ENVIRONMENTAL CONFERENCE: PREPRINT. ATLANTA, GA. TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY, 1975. PP. 181- 184.
LG EN.
AB NONE.
ID SUGAR ACIDS, PHENOLS, TERPENES.
DE SPECTROMETRY, RESINS, PAPER INDUSTRY WASTES, ORGANIC COMPOUNDS, LIPIDS, INDUSTRIAL EFFLUENTS, GAS CHROMATOGRAPHY.
AN P 7600191.

<539>

AU HRUTFIORD, BJORN F.
IN COLL. FOREST RESOUR. UNIV. WASHINGTON. SEATTLE. WASH.
YR 70.
TI ORGANIC MATERIALS IN PULP AND PAPER MILL EFFLUENTS.
SO AMER. CHEM. SOC. DIV. WATER, AIR WASTE CHEM. GEN. PAP. 10. P172-6. 1970.
LG EN.
DE PAPER MILL EFFLUENT ORG. PULP MILL EFFLUENT. WOOD EXTRACTIVE EFFLUENT . BLEACH PLANT EFFLUENT. KRAFT LIGNIN EFFLUENT. PHENOL PAPER MILL EFFLUENT. CARBOHYDRATE PAPER MILL EFFLUENT. TERPENOID COMPD PAPER MILL EFFLUENT. CHLORINATED COMPD PAPER MILL EFFLUENT.
AN C 07624144630.

<540>

AU HSIEH, JIH-HAN.
IN RUTGERS UNIVERSITY THE STATE U. OF NEW JERSEY (NEW BRUNSWICK) (0190) PH.D. 1977, 296PP.
YR 77.
TI CONTROLLED MICROBIAL AND/OR ENZYMATIC OXIDATION OF NAPHTHALENE FOR THE PRODUCTION OF PRIMARY METABOLITES WITH SYSTEM ANALYSIS AND MODELLING.
SO DAI V38(02), SEC B, P0802.
DE ENGINEERING, CHEMICAL (0542).
AN D ADG77-17536.

<541>

AU HUANG, JU-CHANG. GLOYNA, EARNEST F.
IN TEXAS UNIV. AUSTIN. ENVIRONMENTAL HEALTH ENGINEERING RESEARCH LAB.
YR 67. 178P.
TI EFFECTS OF TOXIC ORGANICS ON PHOTOSYNTHETIC REOXYGENATION.
NT TECHNICAL REPT.
PR PC$11.00/MF$0.95.
AB THE REPORT DESCRIBES THE POTENTIAL REDUCTION OF DISSOLVED OXYGEN IN PONDS AND STREAMS DUE TO CHLOROPHYLL INHIBITION RESULTING FROM CERTAIN INDUSTRIAL WASTES. EMPHASIS IS PLACED ON THE LABORATORY TECHNIQUES DEVELOPED FOR THIS STUDY AND THE CHANGES THAT SHOULD BE INCORPORATED IN WASTE STABILIZATION POND DESIGNS. THE RELATIVE TOXICITY OF 33 PHENOLIC-TYPE COMPOUNDS AND 8 PESTICIDES TO CHLORELLA PYRENOIDOSA WAS EVALUATED. (AUTHOR MODIFIED ABSTRACT).
MJ WATER-POLLUTION, FRESH-WATER-BIOLOGY, PHOTOSYNTHESIS, WATER-POLLUTION, PHENOLS, WATER-POLLUTION, PESTICIDES, WATER-POLLUTION.
MN CHLOROPHYLL, TOXICOLOGY.
ID WATER-POLLUTION-EFFECTS-PLANTS, CHLORELLA-PYRENOIDOSA, EPAL.
AN N PB-216 749.

<542>

AU HUBER, J F K. AICHINGER, H. MARKL, P.
IN UNIV. OF VIENNA, DR. KARL LUEGER-RING 1, 1010 VIENNA, AUSTRIA.
YR 76.
TI DETERMINATION OF POLYAROMATIC AND OTHER HYDROCARBONS IN WATER BY MEANS OF GAS-AND HIGH PRESSURE LIQUID CHROMATOGRAPHY.
SO SIXTH ANNUAL SYMPOSIUM ON RECENT ADVANCES IN THE ANALYTICAL CHEMISTRY OF POLLUTANTS. (N.P.), (1976?). NO. 15.
LG EN.
AB NONE.
ID XYLENE, ABSTRACT ONLY.
DE HYDROCARBONS, WATER POLLUTANTS, POLLUTANT DETECTION, LIQUID CHROMATOGRAPHY, GAS CHROMATOGRAPHY, AROMATIC COMPOUNDS.
AN P 7604313.

<543>

AU HUFF, J E. HUFF, L L.
IN ILLINOIS INST. OF TECHNOLOGY, III RESEARCH INST. 10 W. 35TH ST. CHICAGO, IL 60616.
YR 75.
TI ANALYSIS OF THE BENEFITS AND COSTS OF ALTERNATIVE CYANIDE STANDARDS IN ILLINOIS.
SO ILLINOIS INSTITUTE FOR ENVIRONMENTAL QUALITY. IIEQ DOCUMENT 75-24, NOV. 1975. 168PP.
LG EN.
AB NONE.
DE EFFLUENT STANDARDS, ECONOMICS, CYANIDES, ILLINOIS, STATE REGULATIONS .
AN P 7602405.

<544>

AU HUGHES, EVAN E. DICKSON, EDWARD M. SCHMIDT, RICHARD A.
IN STANFORD RESEARCH INST. MENLO PARK, CALIF.
YR 74. 339P*.
TI CONTROL OF ENVIRONMENTAL IMPACTS FROM ADVANCED ENERGY SOURCES.
NT ENVIRONMENTAL PROTECTION TECHNOLOGY SERIES (FINAL).
AV 600/2-74-002. 0.
PR PC$6.50/MF$2.25.
AB THE TECHNOLOGY AND ENVIRONMENTAL EFFECTS ASSOCIATED WITH PRODUCTION OF ENERGY FROM NEW OR ADVANCED SOURCES ARE REVIEWED. THESE INCLUDE SOLAR, GEOTHERMAL, OIL SHALE, SOLID WASTES, UNDERGROUND COAL GASIFICATION, AND HYDROGEN ENERGY SOURCES. PROJECTIONS TO THE YEAR 2000 OF LEVELS OF ENERGY PRODUCTION FROM THE FIRST FOUR OF THESE SOURCES ARE PRESENTED. ENVIRONMENTAL IMPACTS ON AIR AND WATER QUALITY, AND LAND USE ARE DERIVED PER UNIT OF ENERGY. LEVELS OF POLLUTANT EMISSIONS AND OTHER ENVIRONMENTAL EFFECTS OF THE DEVELOPMENT OF THESE ADVANCED ENERGY SOURCES ARE

PROJECTED. IMPACTS LIKELY TO REQUIRE CONTROL MEASURES ARE IDENTIFIED. SUBJECTS FOR RESEARCH AND DEVELOPMENT DIRECTED TOWARD CONTROL OF ENVIRONMENTAL IMPACTS ARE RECOMMENDED. THESE RECOMMENDATIONS ARE INCORPORATED INTO A RESEARCH AND DEVELOPMENT PLAN. APPROXIMATE PRIORITY ASSIGNMENTS DERIVED FROM CONSIDERATION OF THE TIMING OF DEVELOPMENT AND THE IMPORTANCE AND DEGREE OF DEFINITION OF THE IDENTIFIED ENVIRONMENTAL EFFECTS ARE GIVEN.
MJ ENERGY-CONVERSION, ENVIRONMENTAL-IMPACTS, SOLAR-ENERGY, GEOTHERMAL-PROSPECTING, OIL-SHALES, COAL-GASIFICATION.
MN HYDROGEN, WASTES, AIR-POLLUTION, WATER-POLLUTION, LAND-USE, MATERIALS-ESTIMATES, SULFUR-OXIDES, NITROGEN-OXIDES, METHANE, CARBON-MONOXIDE, HYDROCHLORIC-ACID, PARTICLES, FINES, SOLAR-SEA-POWER, HYDROELECTRIC-POWER, WIND-POWER, FORECASTING.
ID NTISEPAORD.
AN N PB-239 450/0SL.

<545>

AU HUNDEMANN, AUDREY S.
IN NATIONAL TECHNICAL INFORMATION SERVICE, SPRINGFIELD, VA. 391 812.
YR 76. 228P*.
TI OIL SHALE MINING, PROCESSING, USES, AND ENVIRONMENTAL IMPACTS (CITATIONS FROM THE NTIS DATA BASE).
NT REPT. FOR 1964-MAR 76. SEE ALSO NTIS/PS-76/0320. SUPERSEDES NTIS/PS-75/362, AND COM-74-10969.
PR PC$25.00/MF$25.00.
AB EXPLORATION, MINING, RETORTING, CHEMISTRY, ENVIRONMENTAL IMPACTS, AND POLICIES RELATING TO OIL SHALE RESEARCH ARE COVERED. ABSTRACTS DISCUSS SUCH THINGS AS OIL SHALE AIR AND WATER POLLUTION CONTROL, PRODUCTION OF SYNTHETIC FUELS, USE OF SPENT OIL SHALE IN ROAD CONSTRUCTION, IDENTIFICATION OF RESEARCH AND DEVELOPMENT PRIORITIES, AND IN SITU RECOVERY OF SHALE OIL. (THIS UPDATED BIBLIOGRAPHY CONTAINS 223 ABSTRACTS, 87 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.).
MJ BIBLIOGRAPHIES, OIL-SHALE.
MN EXPLORATION, MINING, CHEMICAL-ANALYSIS, ENVIRONMENTAL-IMPACTS, GOVERNMENT-POLICIES, NATIONAL-GOVERNMENT, ENERGY-POLICY, IN-SITU-COMBUSTION, UTILIZATION, SHALE-OIL, IN-SITU-RETORTING.
ID NTISNTIS.
AN N NTIS/PS-76/0319/4SL.

<546>

AU HUNG, TSU-CHANG. LEE, YUNG-LI. HSYNG, LIN.
IN INST. CHEM. ACAD. SIN. TAIPEI. TAIWAN.
YR 77.
TI GAS-LIQUID CHROMATOGRAPHY ANALYSIS OF HYDROCARBONS IN MARINE SEDIMENTS AND WATERS.
SO BULL. INST. CHEM. ACAD. SIN. 24. P31-41. 1977.
LG EN.
DE SEAWATER SEDIMENT HYDROCARBON SEEPAGE. DECANE DETN SEAWATER. HEXADECANE DETN SEAWATER.
AN C 08712090519.

<547>

AU HUSSIEN Y A. TEWFIK M S. HAMDI Y A.
YR 74.
TI DEGRADATION OF CERTAIN AROMATIC COMPOUNDS BY RHIZOBIA.
SO SOIL BIOL BIOCHEM. 6 (6). (RECD 1975) 377-381.
DE RHIZOBIUM-PHASEOLI SOIL BACTERIA PROTO CATECHUIC-ACID P HYDROXY BENZOIC-ACID SALICYLIC-ACID SODIUM GLUTAMATE CATECHOL GENTISIC-ACID.
AN B 59057937.

<548>

AU IKEDA, MIKIKO. SUGIHARA, REIKO. OGATA, MASANA.
IN MED. SCH. OKAYAMA UNIV. OKAYAMA. JAPAN.
YR 76.
TI THE METABOLISM AND ACCUMULATION OF PETROLEUM COMPONENTS IN FISH. THE METABOLISM AND EXCERETION OF TOLUENE IN EELS.
SO IGAKU TO SEIBUTSUGAKU. 92. P337- 40. 1976.
LG JA.
DE TOLUENE METAB EEL.
AN C 08609051194.

<549>

AU IL'NITSKII A P. ROZHKOVA L G.
YR 70.
TI POLLUTION OF RESERVOIRS BY CARCINOGENIC HYDRO CARBONS.

SO VOPR ONKOL. 16 (7). 78-82.
DE USSR PLANKTON WATER PLANT BENZ A PYRENE CARCINOGEN SILT.
AN B 53057696.

<550>

AU IL'NITSKII, A. P. ERSHOVA, K. P. ROZHKOVA, L. G. KLUBKOV, V. G. KROLEV, A. A. SHERENESHEVA, V. I.
IN USSR.
YR 72.
TI POLLUTION OF WATER RESERVOIRS BY CARCINOGENIC HYDROCARBONS.
SO NEKOT. ITOGI IZUCH. ZAGRYAZNENIYA VNESH. SREDY KANTSEROGEN. VESHCHESTVAMI. P44-6. 1972.
LG RS.
DE BENZOPYRENE REMOVAL WASTEWATER. POLLUTION WATER BENZOPYRENE.
AN C 08012063612.

<551>

AU ILICHKINA A G. BAT I I. KIRICHENKO V V.
YR 74.
TI SANITARY INSPECTION OF SURFACE WATERS POLLUTED WITH AROMATIC AMINO AND NITRO COMPOUNDS.
SO GIG SANIT. (9). 100-101.
DE P PHENETIDINE P NITRO PHENOL M TRI FLUOROMETHYL ANILINE M TRI FLUOROMETHYL NITRO BENZENE BLOOD MET HEMO GLOBINEMIA ALLERGEN OXYGEN UTILIZATION.
AN B 60058171.

<552>

AU ILISESCU A. STEFANESCU L.
YR 74.
TI RESEARCH ON THE BIO DEGRADABILITY AND TOXICITY OF POLLUTANTS IN WASTE WATERS DISCHARGED BY THE PETROCHEMICAL INDUSTRY.
SO STUD EPURAREA APELOR. 16 (1-7). (RECD 1975) 76-98.
DE MICROORGANISMS GOBIO DAPHNIA ISO BUTYLALDEHYDE ALPHA NAPHTHOL ISO PROPYLAMINE DI METHYLAMINE CARBARYL TOLUENEDIAMINE P CHLORO ANILINE ACTIVATED SLUDGE.
AN B 61051794.

<553>

AU INGLE, P. H. B. KOH, H. Y. PERRETT, R. H.
IN POSTGRAD. SCH. STUD. PHARM. CHEM. UNIV. BRADFORD. BRADFORD. ENGL.
YR 73.
TI GAS-LIQUID CHROMATOGRAPHIC ANALYSIS OF AQUEOUS SOLUTIONS OF HYDROXYPYRIDINES AND HYDROXYQUINOLINES.
SO J. CHROMATOGR. 81. P79-83. 1973.
LG EN.
DE HYDROXYQUINOLINE GAS CHROMATOG. PYRIDINE HYDROXYQUINOLINE CHROMATOG. QUINOLINE METAB CHROMATOG.
AN C 07917102196.

<554>

AU ISHII, T.
IN ENVIRON. SCI. INST. HYOGO PREFECT. KOBE. JAPAN.
YR 73.
TI POLAROGRAPHIC METHOD IN WATER POLLUTION CONTROL. 3. ANALYSIS OF ORGANIC MATERIALS.
SO MIZU SHORI GIJUTSU. 14. P1019- 26. 1973.
LG JA.
DE REVIEW WATER ANALYSIS ORG POLLUTANT. ORG POLLUTANT DETN WATER. POLLUTANT ORG DETN WATER. DDT DETN WATER. ALDEHYDE DETN WATER. SURFACTANT DETN WATER. PHOSPHATE ESTER DETN WATER. BIPHENYL CHLORINATED DETN WATER. CHLORINATED BIPHENYL DETN WATER.
AN C 08016087161.

<555>

AU ISHIKAWA, KIYOSHI. SATO, NOBUTOSHI. TAKATSUKI, KEIGO. SAKAI, KEIICHI.
IN MIYAGI PREFECT. INST. HEALTH. SENDAI. JAPAN.
YR 77.
TI GAS CHROMATOGRAPHIC DETERMINATION OF DIBUTYL PHTHALATE AND DIETHYL PHTHALATE IN WATER AS THEIR NITRO DERIVATIVES.
SO EISEI KAGAKU. 23. P175-9. 1977.
LG JA.
DE DIBUTYL PHTHALATE DETN WATER. DIETHYL PHTHALATE DETN WATER.
AN C 08802011680.

<556>

AU ITURRIAGA R. RHEINHEIMER G.
YR 72.
TI INVESTIGATIONS ON THE OCCURRENCE OF PHENOL DECOMPOSING MICRO ORGANISMS IN WATERS AND SEDIMENTS.
SO KIEL MEERESFORSCH. 28 (2). (RECD 1973) 213-218.
DE BALTIC SEA NORTH SEA SCHWENTINE RIVER KIEL FJORD WEST GERMANY

POLLUTED WATER SEASON TEMPERATURE.
AN B 56060023.

<557>

AU IUROVSKAIA E M. BETVINOVA L E. ERUSALIMSKAIA L F.
YR 68.
TI OXIDATION OF DIATOMIC PHENOLS BY MICROORGANISM.
TR OKISLENIE MIKROORGANIZMAMI DVUKHATOMNYKH FENOLOV.
SO MIKROBIOLOGIIA. 37. 4. P655-61. JUL-AUG 68.
LG RS.
MJ PHENOLS: ME.
MN CATECHOLS: ME. RESORCINOLS: ME.
AN M 69285978.

<558>

AU IVANENKO, G. S. IVANOVA, Z. M.
IN USSR.
YR 76.
TI CHROMATOGRAPHIC METHOD FOR DETERMINING ALPHA.-METHYLSTYRENE IN WASTE WATER.
SO METODY ANAL. KONTROLYA PROIZVOD. KHIM. PROM-STI. 2. P15. 1976.
LG RS.
DE METHYLSTYRENE DETN WASTEWATER GAS CHROMATOG.
AN C 08514098707.

<559>

AU IWAI, SHIGEHISA. KITAO, TAKANE. HIRAYAMA, TOSHIHISA.
IN KYOTO UNIV. KYOTO. JAPAN.
YR 76.
TI CONTACT BIOLOGICAL OXIDATION OF WASTE WATER COMPONENTS FROM COKE FURNACE GAS.
SO MIZU SHORI GIJUTSU. 17. P711-19. 1976.
LG JA.
DE COKING WASTEWATER CYANIDE REMOVAL. PHENOL DEGRDN COKING WASTEWATER. MICROORGANISM CYANIDE BIODEGRDN WASTEWATER.
AN C 08606033847.

<560>

AU JACOBSON, B S.
IN ROSS LABS. COLUMBUS, OH.
YR 75.
TI GAS CHROMATOGRAPHIC ANALYSIS IN WATER POLLUTION.
SO CHROMATOGRAPHIC ANALYSIS OF THE ENVIRONMENT. EDITED BY R. L. GRAB. NEW YORK: MARCEL DEKKER, 1975. PP. 399-427.
LG EN.
AB NONE.
ID PHENOLS, MERCAPTANS, STEROLS.
DE ORGANOMERCURY COMPOUNDS, PCB COMPOUNDS, WATER POLLUTION MEASUREMENTS, PETROLEUM INDUSTRY WASTES, PESTICIDE RESIDUES, ORGANIC COMPOUNDS, GAS CHROMATOGRAPHY, AMINES.
AN P 7601247.

<561>

AU JACQUEMAIN, R. REMY, F. GUINCHARD, C.
IN INST. CHIM. FAC. MED. PHARM. BESANCON. DOUBS. FR.
YR 75.
TI STUDIES AND COMPARISONS OF THE DETERMINATIONS OF PHENOLS IN WATER; APPLICATION TO THE EXAMINATION OF PAPER MILL WASTES.
SO J. FR. HYDROL. 16. P25-32. 1975.
LG FR.
DE PHENOLIC PAPER MILL WASTE. NITROANILINE DETN PHENOL. ANALYSIS PAPER MILL PHENOL.
AN C 08606033762.

<562>

AU JAMES M O. BEND J R.
YR 76.
TI MIXED FUNCTION OXIDASE ACTIVITY IN FLORIDA USA MARINE SPECIES.
SO PHARMACOLOGIST. 18 (2). 207.
DE ABSTRACT CALLINECTES-SAPIDUS BLUE CRAB PANULIRUS-ARGUS SPINY LOBSTER HEPATO PANCREAS FISH LIVER MICROSOMES CYTOCHROME P-450 BENZO A PYRENE HYDROXYLASE 7 ETHOXY COUMARIN O DEETHYLASE BENZPHETAMINE N DEMETHYLASE ENVIRONMENTAL POLLUTANTS.
AN B 77000735.

<563>

AU JAMISON V W. RAYMOND R L. HUDSON J O.
YR 76.
TI BIO DEGRADATION OF HIGH OCTANE GASOLINE.
SO SHARPLEY, J. MILES AND ARTHUR M. KAPLAN (ED.). PROCEEDINGS OF THE THIRD INTERNATIONAL BIODEGRADATION SYMPOSIUM. KINGSTON, RHODE ISLAND, USA, AUGUST 17-23, 1975. XIV+1138P. ILLUS. APPLIED SCIENCE PUBLISHERS

LTD: LONDON, ENGLAND. ISBN 0-85334-679-8. (RECD 1977) 187-196.
DE FLAVOBACTERIUM MICROCOCCUS ACINETOBACTER PSEUDOMONAS NOCARDIA BACTERIA CO OXIDATION.
AN B 78019856.

<564>
AU JANK B E. GUO H M. CAIRNS V W.
YR 74.
TI ACTIVATED SLUDGE TREATMENT OF AIRPORT WASTE WATER CONTAINING AIRCRAFT DE ICING FLUIDS.
SO WATER RES. 8 (11). 875-880.
DE SALMO-GAIRDNERI FILAMENTOUS MICROORGANISMS SLUDGE BULKING EFFLUENT QUALITY BIOCHEMICAL OXYGEN DEMAND SUSPENDED SOLIDS GLYCOL TOXICITY.
AN B 59046058.

<565>
AU JANZEN, S. PFUDERER, P. RAINEY, W T, JR.
IN OAK RIDGE NATIONAL LAB. BIOLOGY DIV. OAK RIDGE, TN 37830.
YR 75.
TI THE IDENTIFICATION OF PHTHALIC ACID ESTERS IN THE TISSUES OF CYPRINODONT FISH AND THEIR ACTIVITY AS HEARTRATE DEPRESSORS.
SO ENVIRONMENTAL RESEARCH, 9(3): 215-223, JUNE 1975.
LG EN.
AB NONE.
ID GOLDFISH, HEARTRATE DEPRESSORS, LIVERS, PHTHALIC ACID ESTERS.
DE AROMATIC COMPOUNDS, BIOASSAYS, CARDIOVASCULAR SYSTEM, CHROMATOGRAPHY, DIGESTIVE SYSTEM, ESTERS, FISH, TISSUES.
AN P 7504452.

<566>
AU JENIK, JOSEF. KOZAK, PAVEL.
IN VYS. SK. CHEM.-TECHNOL. PARDUBICE. CZECH.
YR 73.
TI DETERMINATION OF CYANIDES.
SO POVRCHOVE UPRAVY. 13. P11-15. 1973.
LG CZ.
DE CYANIDE DETN. PHOTOMETRY CYANIDE DETN. SULFONATED DIPHENYLCARBAZONE REAGENT CYANIDE DETN. COPPER REAGENT CYANIDE DETN. WASTE GAS WATER ANALYSIS CYANIDE.
AN C 08024140874.

<567>
AU JERINA D M. DALY J W. JEFFREY A M. GIBSON D T.
YR 71.
TI CIS 1 2 DI HYDROXY-1 2 DI HYDRO NAPHTHALENE A BACTERIAL METABOLITE FROM NAPHTHALENE.
SO ARCH BIOCHEM BIOPHYS. 142 (1). 394-396.
DE PSEUDOMONAS.
AN B 54010237.

<568>
AU JIGAMI Y. OMORI T. MINODA Y.
YR 74.
TI A NEW RING FISSION PRODUCT SUGGESTIVE OF AN UNKNOWN REDUCTIVE STEP IN THE DEGRADATION OF N BUTYL BENZENE BY PSEUDOMONAS.
SO AGRIC BIOL CHEM. 38 (9). 1757- 1759.
DE PSEUDOMONAS-DESMOLYTICA BACTERIA SHORT CHAIN ALKYLBUTYL BENZENES STRUCTURE.
AN B 59042737.

<569>
AU JOEL A R. GRADY C P L JR.
YR 77.
TI INHIBITION OF NITRIFICATION EFFECTS OF ANILINE AFTER BIO DEGRADATION.
SO J WATER POLLUT CONTROL FED. 49 (5). 778-788.
DE BACTERIA ACTIVATED SLUDGE.
AN B 64071702.

<570>
AU JOHANSSON M. HAGERBY E.
YR 74.
TI INFLUENCE OF GROWTH CONDITIONS METABOLIC INHIBITORS AND PHENOLIC COMPOUNDS ON THE ATP POOL IN FOMES-ANNOSUS.
SO PHYSIOL PLANT. 32 (1). 23-32.
DE FOMES-PINI ARMILLARIA-MELLEA STEREUM-SANGUINOLENTUM CONIOPHORA-PUTEANA MYCELIUM OXYGEN UPTAKE INORGANIC PHOSPHATE EXUDATION LACCASE.
AN B 59022267.

<571>
AU JOHNSON, B. THOMAS.
IN FISH WILDL. SERV. FISH-PESTIC. RES. LAB. COLUMBIA. MO.
YR 74.
TI AQUATIC FOOD CHAIN MODELS FOR ESTIMATING BIOACCUMULATION AND

BIODEGRADATION OF XENOBIOTICS.
SO PROC. INT. CONF. TRANSP. PERSISTENT CHEM. AQUAT. ECOSYST. PIV, 17-227 . 1974.
LG EN.
DE PESTICIDE FOOD CHAIN MODEL. DDT FOOD CHAIN MODEL. METHOXYCHLOR FOOD CHAIN MODEL. DIELDRIN FOOD CHAIN MODEL. ETHYLHEXYL PHTHALATE FOOD CHAIN MODEL. LEPTOPHOS FOOD CHAIN MODEL. HEXACHLORO BENZENE FOOD CHAIN MODEL.
AN C 08305038473.

<572>

AU JOLLEY, R. L. PITT, W. W. JR. THOMPSON, J. E.
IN OAK RIDGE NATIONAL LAB. TENN. ADMINISTRATION. 4832000.
YR 77. 5P.
TI ORGANICS IN AQUEOUS PROCESS STREAMS OF A COAL CONVERSION BENCH- SCALE UNIT USING THE HYDROCARBONIZATION PROCESS: HPLC AND GC/MS ANALYSIS.
NT 23. IES ANNUAL TECHNICAL MEETING AND EXPOSITION, LOS ANGELES, CALIFORNIA, UNITED STATES OF AMERICA (USA), 24 APR 1977.
PR PC A02/MF A01.
AB A BENCH-SCALE STUDY OF THE COAL HYDROCARBONIZATION PROCESS IS BEING CONDUCTED AT OAK RIDGE NATIONAL LABORATORY. AS PART OF THIS STUDY, THE ORGANIC CONSTITUENTS IN THE AQUEOUS STREAM FROM THE PRODUCT SCRUBBER ARE BEING CHARACTERIZED USING HIGH-PRESSURE LIQUID CHROMATOGRAPHY (HPLC) FOR SEPARATION OF THE WATER-SOLUBLE ORGANICS AND GAS CHROMATOGRAPHY--MASS SPECTROMETRY (GC/MS) FOR IDENTIFICATION OF THE ORGANICS. FOR EXAMPLE, IN ONE PREPARATIVE-SCALE HPLC SEPARATION, MORE THAN 100 UV-ABSORBING CONSTITUENTS WERE DETECTED AND SEPARATED. USING GC/MS TECHNIQUES, MANY OF THESE CHROMATOGRAPHIC PEAKS WERE IDENTIFIED AS PHENOLIC COMPOUNDS SUCH AS CATECHOL, METHYLCATECHOLS, ORCINOL, AND RESORCINOL. THESE COMPOUNDS WERE QUANTIFIED AT CONCENTRATIONS OF 10 TO 1000 MILLIGRAMS/LITER. EXPERIMENTAL METHODOLOGY FOR HPLC AND GC/MS TECHNIQUES IS DISCUSSED, AND ANALYTICAL RESULTS AND POSSIBLE ENVIRONMENTAL IMPLICATIONS ARE PRESENTED. (ERA CITATION 02: 053642).
MJ COAL, COAL-LIQUEFACTION, LIQUID-WASTES, PETROCHEMICALS, PHENOLS, CHEMICAL-ANALYSIS.
MN BENCH-SCALE-EXPERIMENTS, CHROMATOGRAPHY, ENVIRONMENTAL-IMPACTS, GAS-CHROMATOGRAPHY, HYDROGEN, HYDROGENATION, MASS-SPECTROSCOPY, PYROLYSIS, ULTRAVIOLET- RADIATION, WATER.
ID ERDA-010405, ERDA-010900, ERDA-010403, ENVIRONMENTAL-SURVEYS, CONCENTRATION-COMPOSITION, NTISERDA.
AN N CONF-770415-1.

<573>

AU JOLLEY, R. L. PITTS, W. W. JR. SCOTT, C. D. JONES, G. JR. THOMPSON, J. E.
IN OAK RIDGE NATIONAL LAB. TENN. 4832000.
YR 75. 12P.
TI ANALYSIS OF SOLUBLE ORGANIC CONSTITUENTS IN NATURAL AND PROCESS WATERS BY HIGH-PRESSURE LIQUID CHROMATOGRAPHY.
PR PC$3.50/MF$2.25.
AB FOR ABSTRACT, SEE ERA 75 05, NUMBER 00847.
MJ ORGANIC-COMPOUNDS, GAS-CHROMATOGRAPHY.
MN ENVIRONMENTS, LIQUID-WASTES, MASS-SPECTROSCOPY, ORGANIC-CHLORINE-COMPOUNDS, PHENOLS, WASTE-PROCESSING, WATER-POLLUTION.
ID ERDA-400102, ERDA-520200, WATER-POLLUTION-DETECTION, NTISERDA.
AN N CONF-750603-1.

<574>

AU JONES G L. CARRINGTON E G.
YR 72.
TI GROWTH OF PURE AND MIXED CULTURES OF MICROORGANISMS CONCERNED IN THE TREATMENT OF CARBONIZATION WASTE LIQUORS.
SO J APPL BACTERIOL. 35 (3). 395-404.
DE BACTERIA THIO CYANATE PHENOL.
AN B 56057693.

<575>

AU JONES, PETER F. JOHNSON, K. E.
IN REGINA WATER RES. INST. UNIV. SASKATCHEWAN. REGINA. SASK.
YR 73.
TI ESTIMATION OF PHENOLS BY THE 4-AMINOANTIPYRINE METHOD. II. PRODUCTS FROM PARA-SUBSTITUTED ALKYLPHENOLS.
SO CAN. J. CHEM. 51. P3733-7. 1973.
LG EN.

DE OXIDN PHENOL AMINOANTIPYRINE
QUINONEIMIDE. REARRANGEMENT
QUINONEIMIDE BENZOXAZEPINE. ANALYSIS
PHENOL AMINOANTIPYRINE.
AN C 08015081740.

<576>
AU JONES, PETER F. JOHNSON, K. E.
IN REGINA WATER RES. INST. UNIV.
SASKATCHEWAN. REGINA. SASK.
YR 73.
TI ESTIMATION OF PHENOLS BY THE 4-
AMINOANTIPYRINE METHOD.
IDENTIFICATION OF THE COLORED
REACTION PRODUCTS BY PROTON MAGNETIC
RESONANCE SPECTROSCOPY.
SO CAN. J. CHEM. 51. P2860-8. 1973.
LG EN.
DE PHENOL OXIDN AMINOANTIPYRINE
MECHANISM.
AN C 08003014337.

<577>
AU JUNGCLAUS G A. GAMES L M. HITES R
A.
YR 76.
TI IDENTIFICATION OF TRACE ORGANIC
COMPOUNDS IN TIRE MANUFACTURING
PLANT WASTE WATERS.
SO ANAL CHEM. 48 (13). 1894-1896.
DE FATTY-ACIDS BENZOTHIAZOLE 2 MERCAPTO
BENZOTHIAZOLE POLLUTION GAS
CHROMATOGRAPHY MASS SPECTROMETRY.
AN B 63029494.

<578>
AU JUNK G A. RICHARD J J. FRITZ J S.
SVEC H J.
YR 76.
TI RESIN SORPTION METHODS FOR
MONITORING SELECTED CONTAMINANTS IN
WATER.
SO KEITH, LAWRENCE H. IDENTIFICATION
AND ANALYSIS OF ORGANIC POLLUTANTS
IN WATER. CONGRESS. MEXICO CITY,
MEXICO, DEC. 1975. X+718P. ILLUS.
ANN ARBOR SCIENCE PUBLISHERS INC.
ANN ARBOR, MICH. U.S.A. ISBN
0-250-40131-2. 135- 153.
DE CATFISH POLLUTION PESTICIDES
HERBICIDES INSECTICIDES
CHLOROPHENOXY ACETIC ACIDS AND
ESTERS WATER TREATMENT GAS
CHROMATOGRAPHY.
AN B 77007287.

<579>
AU KALIBERDO, L. M. MAKAROVA, V. V.
KARPENKO, N. N. SUVOROVA, N. G.
EPPEL, S. A.
IN USSR.
YR 75.
TI EXHAUSTIVE CATALYTIC OXIDATION OF
LOW CONCENTRATIONS OF PHENOL IN THE
PRESENCE OF WATER VAPOR.
SO PROM. I SAN. OCHISTKA GAZOV.
NAUCH.-TEKHN. SB. P18-20. 1975.
LG RS.
DE PHENOL OXIDN CATALYST.
AN C 08419135229.

<580>
AU KAMSHILOV, M. M. KOSTYAEV, V. YA.
LAPTEVA, N. A. ZHUKOV, B. F.
GORYACHEVA, N. V. MIKRYAKOVA, T. F.
UMORIN, P. P. BARONKINA, L. A.
ZAKHAROVA, L. I.
IN USSR.
YR 73.
TI PHENOL DEGRADATION IN MODEL
BIOCENOSES.
SO TR. INST. BIOL. VNUTR. VOD, AKAD.
NAUK SSSR. NO. 24. P184-200. 1973.
LG RS.
DE PHENOL BIODEGRDN RIVER WATER.
AN C 08016087253.

<581>
AU KANDZAS, P. F. MOKINA, A. A.
MARCHENKO, R. F. SAVINA, L. A.
IN USSR.
YR 70.
TI OXIDATION OF CYCLOHEXANE IN AN
AQUEOUS SOLUTION UNDER THE ACTION OF
OZONE.
SO TR. VSES. NAUCH.-ISSLED. INST.
VODOSNABZH. KANALIZ. GIDROTEKH.
SOORUZHENII INZH. GIDROGEOL. NO. 28.
P18-23. 1970.
LG RS.
DE OZONE OXIDN CYCLOHEXANE WATER SOLN.
PETROLEUM WASTE WATER OZONE OXIDN .
AN C 07514091146.

<582>
AU KANEKO Y. SAINO Y. DOI S.
YR 69.
TI STUDIES ON THE METABOLISM OF POLY
NUCLEAR AROMATIC HYDRO CARBONS BY
MICROORGANISMS PART 2 PHENANTHRENE
METABOLISM OF STRAIN S- 210 AND 592.
SO NIPPON NOGEI KAGAKU KAISHI. 43 (1).
21-27.
DE FLAVOBACTERIUM PSEUDOMONAS-

AERUGINOSA.
AN B 51085367.

<583>

AU KANYGINA, A. V. VANIN, V. V.
LEBEDEVA, M. V. ARSENOVA, A. N.
IN USSR.
YR 73.
TI EFFECT OF SEPARATE COMPONENTS ON BIOLOGICAL OXIDATION PROCESSES IN THE PURIFICATION OF WASTE WATERS FROM THE PRODUCTION OF ETHYLENE HYDROCARBONS.
SO TR. VSES. NAUCHNO-ISSLED. INST. VODOSNABZH. KANALIZ. GIDROTEKH. SOORUZH. INZH. GIDROGEOL. 37. P46-8. 1973.
LG RS.
DE ETHYLENE OXIDE WASTEWATER TREATMENT. ETHYLENE GLYCOL WASTEWATER. CHLOROETHANOL REMOVAL WASTEWATER. CALCIUM CHLORIDE WASTEWATER. HYDROXIDE CALCIUM WASTEWATER.
AN C 08416111231.

<584>

AU KAPLAN, LOUIS. WENDLING, L. A. WILZBACH, K. E.
IN CHEM. DIV. ARGONNE NATL. LAB. ARGONNE. ILL.
YR 71.
TI PHOTOOXIDATION OF AQUEOUS BENZENE. I. IDENTIFICATION OF THE PRODUCT AS 1,3-CYCLOPENTADIENE-1-CARBOXALDEHYDE.
SO J. AMER. CHEM. SOC. 93. P3819- 20. 1971.
LG EN.
DE BENZENE PHOTOOXIDN. CYCLOPENTADIENECARBOXALDEHYDE.
AN C 07513088218.

<585>

AU KAPLIN, G. I. TSYGUTKIN, S. G.
IN USSR.
YR 75.
TI CALCULATION OF THE EFFECT OF SORPTION PROCESSES FOR PREDICTING THE POLLUTION OF GROUND WATERS BY PHENOLS.
SO V SB. PROBL. OKHRANY VOD, KHAR'KOV. P100-4. 1975.
LG RS.
DE POLLUTION GROUNDWATER PHENOL PREDICTION. SORPTION GROUNDWATER POLLUTION PREDICTION.
AN C 08526198018.

<586>

AU KAPLIN, V. T. PANCHENKO, S. E.
IN GIDROKHIM. INST. USSR.
YR 68.
TI POLLUTION AND SELF-PURIFICATION OF THE SUNZHA RIVER.
SO VSES. NAUCH.-TEKH. KONF. OKHR. POVERKH. PODZEMN. VOD ZAGRYAZ. DOKL. SOOBSHCH. VOP. SAMOOCHISHCHENIYA VODOEMOV SMESHENIYA STOCHNYKH VOD. P79-80. 1968.
LG RS.
AV KHUKOV, A. I.
DE PETROLEUM RIVERS SELF PURIFN. RIVERS PETROLEUM SELF PURIFN. PHENOLS RIVERS SELF PURIFN.
AN C 07210047157.

<587>

AU KARASEVA N N. PAPCHENKOV V G.
YR 74.
TI USE OF THE BULRUSH IN WATER MANAGEMENT.
SO RASTIT RESUR. 10 (1). 138-142.
DE SCIRPUS-LACUSTRIS ESCHERICHIA- COLI SALMONELLA FISH AQUATIC PLANTS DOMESTIC INDUSTRIAL WASTE PURIFICATION NUTRIENTS MINERALS TOXIC ORGANIC COMPOUNDS PHENOL EXTRACTION BACTERICIDAL EFFECT.
AN B 59028377.

<588>

AU KARIYA, TEIJI. AKIBA, REIKO. SUZUKI, SHUKO. TSUDA, TSUTOMU.
IN TOHOKU UNIV. FACULTY OF AGRICULTURE, SENDAI, JAPAN.
YR 67.
TI STUDIES ON THE POST-MORTEUM IDENTIFICATION OF THE POLLUTANT IN THE FISH KILLED BY WATER POLLUTION - IV. DETECTION OF CYANIDE IN THE FISH.
SO JAPANESE SOCIETY OF SCIENTIFIC FISHERIES. BULLETIN, 33(4): 311-314, APRIL 1967.
LG XX.
AB NONE.
ID PIRIZIN-PIRAZORON METHOD.
DE CYANIDE, TOXICITY, FISHES.
AN P 7000631.

<589>

AU KARIYA, TEIJI. ETO, SHUKO. OGASAARA, SUSUMU.
IN TOHOKU UNIV. SENDAI. JAPAN.
YR 68.
TI POST-MORTEM IDENTIFCATION OF THE

POLLUTANT IN FISH KILLED BY WATER POLLUTION. VIII. ACUTE POISONING WITH PHENOL.
SO NIPPON SUISAN GAKKAISHI. 34. P764-9. 1968.
LG JA.
DE PHENOL TOXICITY FISH. TOXICITY PHENOL FISH. WATER POLLUTION FISH. POLLUTION WATER FISH. FISH WATER POLLUTION.
AN C 07211053327.

<590>
AU KARIYA, TEIJI. ETO, SHUKO. OGASAWARA, SUSUMU.
IN TOKOKU UNIV. FACULTY OF AGRICULTURE SENDAI, JAPAN.
YR 68.
TI STUDIES ON THE POST-MORTEM IDENTIFICATION OF THE POLLUTANT IN FISH KILLED BY WATER POLLUTION - VII. ON ACUTE POISONING WITH PHENOL.
SO JAPANESE SOCIETY OF SCIENTIFIC FISHERIES. BULLETIN, 34(9): 764-769, SEPT. 1968.
LG XX.
AB NONE.
ID GIBBS METHOD.
DE PHENOL, TOXICITY, FISHES.
AN P 7000242.

<591>
AU KATO, TAKETOSHI.
IN MED. SCH. NAGOYA CITY UNIV. NAGOYA. JAPAN.
YR 73.
TI TOXICITY OF CHEMICAL SUBSTANCES (HEAVY METALS, ETC.) TO FISH AND ANIMAL.
SO NAGOYA SHIRITSU DAIGAKU IGAKKAI ZASSHI. 24. P11-34. 1973.
LG JA.
DE HEAVY METAL TOXICITY FISH MAMMAL. CYANIDE TOXICITY FISH MAMMAL. CADMIUM TOXICITY FISH MAMMAL. CHROMATE TOXICITY FISH MAMMAL. COPPER TOXICITY FISH MAMMAL. ZINC TOXICITY FISH MAMMAL. PERMANGANATE TOXICITY FISH MAMMAL. MERCURY TOXICITY FISH MAMMAL. LEAD TOXICITY FISH MAMMAL. ALUMINUM TOXICITY FISH MAMMAL.
AN C 08015078898.

<592>
AU KATZ, S. PITT, W. W. JR.
IN OAK RIDGE NATL. LAB. OAK RIDGE. TENN.
YR 75.
TI SENSITIVE MONITORING OF PHENOLS AFTER LIQUID CHROMATOGRAPHY. COMMENTS .
SO J. CHROMATOGR. 111. P470-1. 1975.
LG EN.
DE PHENOL DETN WATER. CERATE OXIDATIVE MONITOR PHENOL DETN.
AN C 08426184548.

<593>
AU KATZER, JAMES R.
IN DELAWARE UNIV. NEWARK. DEPT. OF CHEMICAL ENGINEERING. 401 240.
YR 73. 147P.
TI CATALYTIC OXIDATION OF ORGANICS IN WASTEWATER.
NT PROJECT COMPLETION REPT. JUL 70- JUN 73. SPONSORED IN PART CONTRACTS DI-14-31-0001-3508 AND DI-14-31-0001- 3808.
PR PC$4.50/MF$1.45.
AB MANY INDUSTRIAL WASTEWATER STREAMS CONTAIN HIGN CONCENTRATIONS OF ORGANIC MATERIAL WHICH ARE OFTEN DIFFICULT TO TREAT BIOLOGICALLY BECAUSE OF THEIR TOXICITY OR REFRACTORY NATURE. CATALYTIC OXIDATION IS A TECHNIQUE ON WHICH LITTLE DATA IS AVAILABLE ALTHOUGH AT LEAST ONE COMMERCIAL CATALYTIC OXIDATION PROCESS HAS BEEN ANNOUNCED. IN THIS WORK THE CATALYTIC OXIDATION OF PHENOL IN AQUEOUS SOLUTION HAS BEEN STUDIED OVER SUPPORTED COPPER OXIDE AND MANGANESE DIOXIDE TO PROVIDE BOTH FUNDAMENTAL AND PRACTICAL DESIGN INFORMATION ON THE PROCESS. THE AQUEOUS-PHASE PHENOL OXIDATION STUDIES WERE CARRIED OUT IN BATCHWISE MODE AT ATMOSPHERIC PRESSURE AND 100C, AND IN AN AUTOCLAVE AT TEMPERATURES FROM 96 TO 200C AND OXYGEN PRESSURE OF 1 TO 17 ATM. THE ECONOMICS OF THE SYSTEM ARE DISCUSSED.
MJ PHENOLS, OXIDATION, CATALYSIS, INDUSTRIAL-WASTE-TREATMENT.
MN COPPER-OXIDES, REACTION- KINETICS, WATER-TREATMENT, MANGANESE-OXIDES, PRESSURE, TEMPERATURE, DESIGN, PROCESSING, FREE-RADICALS, COST-ESTIMATES, FEASIBILITY, INDUSTRIAL-WASTES.
ID CHEMICAL-REACTION-MECHANISMS, OWRR.
AN N PB-226 300/2.

<594>

AU KAUFMAN, K. S.
IN USSR.
YR 73.
TI INFLUENCE OF SOME COMPONENTS PRESENT IN WASTE WATERS ON THE DETERMINATION OF THE TOTAL CONTENT OF VOLATILE PHENOLS.
SO OCHIST. PROIZVOD. STOCH. VOD. NO. 5. P181-6. 1973.
LG RS.
DE PHENOL DETN WASTEWATER INTERFERENCE. WASTEWATER ANALYSIS PHENOL INTERFERENCE.
AN C 08120126515.

<595>

AU KAUFMAN, Z. S.
IN DEP. WATER PROB. PETROZAVODSK. USSR.
YR 75.
TI CERTAIN PROBLEMS OF PHENOL INTOXICATION OF ENCHYTRAEUS ALBIDUS (OLIGOCHAETA) FROM THE STANDPOINT OF STRESS.
SO GIDROBIOL. ZH. 11. P62-5. 1975.
LG RS.
DE ENCHYTRAEUS PHENOL TOXICITY DIBAZOLE. WORM PHENOL TOXICITY.
AN C 08415100362.

<596>

AU KAUSS, P. HUTCHINSON, T. C. SOTO, C. HELLEBUST, J. GRIFFITHS, M.
IN INST. ENVIRON. SCI. ENG. UNIV. TORONTO. TORONTO. ONT.
YR 73.
TI TOXICITY OF CRUDE OIL AND ITS COMPONENTS TO FRESH WATER ALGAE.
SO PROC. JOINT CONF. PREV. CONTR. OIL SPILLS. P703-14. 1973.
LG EN.
DE CHLAMYDOMONAS OIL SPILL TOXICITY. CHLORELLA OIL SPILL TOXICITY. PHYTOPLANKTON FRESHWATER OIL TOXICITY. NAPHTHALENE OIL TOXICITY PHYTOPLANKTON. BICARBONATE UPTAKE ALGAE HYDROCARBON. HYDROCARBON PARAFFIN CHLORELLA GROWTH.
AN C 08017091731.

<597>

AU KAWAHARA, FRED K.
IN FWQA, DIV. OF WATER QUALITY RESEARCH ANALYTICAL QUALITY CONTROL LAB. CINCINNATI, OH.
YR 71.
TI GAS CHROMATOGRAPHIC ANALYSIS OF MERCAPTANS, PHENOLS, AND ORGANIC ACIDS IN SURFACE WATERS WITH USE OF PENTAFLUOROBENZYL DERIVATIVES.
SO ENVIRONMENTAL SCIENCE AND TECHNOLOGY. WASH. D.C. 5(3): 235-239, MARCH, 1971.
LG EN.
AB NONE.
ID MERCAPTANS, WATER ANALYSIS, PENTAFLUOROBENZYL DERIVATIVES, ORGANIC ACIDS, PHENOLS.
DE GAS CHROMATOGRAPHY, SURFACE WATERS.
AN P 7006934.

<598>

AU KAWAHARA, FRED K.
IN DIV. WATER QUAL. RES. FED. WATER POLLUT. CONTROL ADM. CINCINNATI. OHIO.
YR 69.
TI PENTAFLUOROBENZYL DERIVATIVE METHOD FOR THE MICRODETERMINATION OF ACIDS IN SURFACE WATERS.
SO AMER. CHEM. SOC. DIV. WATER, AIR WASTE CHEM. GEN. PAP. P170-2. 1969.
LG EN.
DE PENTAFLUOROBENZYL DERIV ACIDS DETN. ACIDS DETN POLLUTED WATERS. MERCAPTANS DETN POLLUTED WATERS. PHENOLS DETN POLLUTED WATERS.
AN C 07326133835.

<599>

AU KAWAI, FUSAKO. HANADA, KEIZO. TANI, YOSHIKI. OGATA, KOICHI.
IN DEP. AGRIC. CHEM. KYOTO UNIV. KYOTO. JAPAN.
YR 77.
TI BACTERIAL DEGRADATION OF WATER-INSOLUBLE POLYMER (POLYPROPYLENE GLYCOL).
SO J. FERMENT. TECHNOL. 55. P89-96. 1977.
LG EN.
DE POLYPROPYLENE GLYCOL DECOMPN CORYNEBACTERIUM.
AN C 08701002190.

<600>

AU KAWAKAMI, Y. NISHIMURA, H.
IN UNIV. OF TOKYO, DEPT. OF CHEMICAL ENGINEERING, BUNKYO-KU, TOKYO, 113 JAPAN.
YR 76.
TI BENZO(A)PYRENE IN THE SEDIMENT OF OSAKA BAY AND KEIHIN CANAL AND ITS ESTIMATED SOURCES.
SO NIPPON KAIYO GAKKAI-SHI, 32(4): 175-181, AUG. 1976.

LG EN.
AB NONE.
ID OSAKA BAY, BENZO(A)PYRENE, IRONWORKS, COKE PLANTS, KEIHIN CANAL.
DE METAL INDUSTRY WASTES, REFINERIES, INDUSTRIAL EFFLUENTS, JAPAN COAST, GAS INDUSTRY WASTES, SEDIMENTS, WATER POLLUTANTS, SEAWATER, HYDROCARBONS, AROMATIC COMPOUNDS.
AN P 7701439.

<601>
AU KEITH L H.
YR 76.
TI GAS CHROMATOGRAPHY MASS SPECTROMETRY ANALYSES OF ORGANIC COMPOUNDS IN TREATED KRAFT PAPER MILL WASTE WATERS.
SO KEITH, LAWRENCE H. IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER. CONGRESS. MEXICO CITY, MEXICO. DEC. 1975. X+718P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40131-2. 671- 707.
DE POLLUTION TERPENES FATTY-ACIDS RESIN ACIDS PHENOLS COMPUTER CHLORINATION METHYLATION.
AN B 77007314.

<602>
AU KEITH L H. GARRISON A W. ALLEN F R. CARTER M H. FLOYD T L. POPE J D. THRUSTON A D JR.
YR 76.
TI IDENTIFICATION OF ORGANIC COMPOUNDS IN DRINKING WATER FROM 13 USA CITIES.
SO KEITH, LAWRENCE H. IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER. CONGRESS. MEXICO CITY, MEXICO, DEC. 1975. X+718P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40131-2. 329- 373.
DE POLLUTION ALACHLOR HERBICIDE DI ETHYL ATRAZINE TRI METHYL ISO CYANURATE CHLORAL COMPUTERIZED GAS CHROMATOGRAPHY MASS SPECTROMETRY.
AN B 77007300.

<603>
AU KELLY, JOHN ARTHUR.
IN OKLAHOMA STATE UNIVERSITY (0664) PH.D. 1973. 101PP.
YR 73.
TI THE DETERMINATION OF PHENOLIC- TYPE COMPOUNDS IN WATER BY HIGH- PRESSURE LIQUID CHROMATOGRAPHY.
SO DAI V34(10), SEC B, P4858.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG74-08061.

<604>
AU KEMP, HOMER T. LITTLE, ROBERT L. HOLOMAN, VERNA L. DARBY, RALPH L.
IN BATTELLE COLUMBUS LABS. OHIO. WASHINGTON, D.C. 407 080.
YR 73. 538P*.
TI WATER QUALITY CRITERIA DATA BOOK, VOLUME V, EFFECTS OF CHEMICALS ON AQUATIC LIFE.
NT WATER POLLUTION CONTROL RESEARCH SERIES.
AV PAPER COPY ALSO AVAILABLE FROM GPO, PC$4.95.
PR PC$7.95/MF$2.25.
AB THE REPORT IS AN EXTENSIVE COMPILATION OF DATA ON THE EFFECTS OF CHEMICALS ON AQUATIC LIFE WHICH WERE EXTRACTED FROM LITERATURE PUBLISHED DURING THE PERIOD 1968-1972. IT IS AN UPDATE OF AN EARLIER REPORT ENTITLED 'WATER QUALITY CRITERIA DATA BOOK, VOLUME III, EFFECTS OF CHEMICALS ON AQUATIC LIFE. ' THE DATA ARE ARRANGED ALPHABETICALLY BY CHEMICAL AND ARE CONCISELY REPRESENTED IN A COLUMNAR FORMAT WHICH INCLUDES ORGANISM NAMES, TYPE OF STUDY, CHEMICAL EFFECT, CONTROLLED PARAMETERS, SIGNIFICANT COMMENTS ON THE TEST, AND SOURCE OF THE DATA. THE DATA WERE COMPILED USING A PROGRAM PREPARED AS PART OF THE WORK.
MJ WATER-POLLUTION, TOXICOLOGY, AQUATIC-BIOLOGY.
MN INORGANIC-COMPOUNDS, ORGANIC-COMPOUNDS, TABLES-DATA, BIOASSAY, FISHES, BIOCHEMICAL-OXYGEN-DEMAND, INDUSTRIAL-WASTES, INDICATOR-SPECIES, TEMPERATURE, DISSOLVED-GASES, OXYGEN, METALS, ORGANIC-WASTES, PESTICIDES, CHLORINE-ORGANIC- COMPOUNDS, PHENOLS, CYANIDES.
ID WATER-POLLUTION-EFFECTS-ANIMALS, WATER-POLLUTION-EFFECTS-PLANTS, NTISEPAFWQ.
AN N PB-234 435/6.

<605>
AU KENNEDY R S. FINNERTY W R.
IN DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF GEORGIA, ATHENS,

GEORGIA 30602.
YR 75.
TI MICROBIAL ASSIMILATION OF HYDROCARBONS. II. INTRACYTOPLASMIC MEMBRANE INDUCTION IN ACINETOBACTER SP.
SO ARCH MICROBIOL. 102. 2. P85-90. 1975.
LG EN.
MJ ALCALIGENES: ME. OXIDATION-REDUCTION.
MN ACINETOBACTER: UL, GD. ME. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 75108073.

<606>
AU KENNER, C T. BIEHL, E R. GUERRERO, H.
IN SOUTHERN METHODIST UNIV. DEPT. OF CHEMISTRY, DALLAS, TX 75275.
YR 76.
TI HIGH-PRESSURE LIQUID CHROMATOGRAPHY OF BENZO(A)PYRENE AND BENZO(GHI)PERYLENE IN OIL-CONTAMINATED SHELLFISH.
SO ASSOCIATION OF OFFICIAL ANALYTICAL CHEMISTS. JOURNAL, 59(5): 989-992, SEPT. 1976.
LG EN.
AB NONE.
ID BENZO(A)PYRENE, BENZO(GHI)PERYLENE, CLAMS.
DE POLLUTANT ANALYSIS, LIQUID CHROMATOGRAPHY, CARCINOGENS, OIL POLLUTION MOLLUSCA, HYDROCARBONS.
AN P 7700421.

<607>
AU KHESINA, A. YA. PETROVA, T. V.
IN USSR.
YR 73.
TI USE OF QUASILINEAR LUMINESCENCE SPECTRA IN THE DETERMINATION OF A SERIES OF POLYCYCLIC AROMATIC HYDROCARBONS IN MIXED SOLVENTS AND COMPLEX EXTRACTS.
SO ZH. PRIKL. SPEKTROSK. 18. P850- 5. 1973.
LG RS.
DE BENZPYRENE DETN. PYRENE DETN. PERYLENE DETN. BENZPERYLENE DETN. BENZANTHRACENE DETN. CORONENE DETN. LUMINESCENCE POLYCYCLIC AROM DETN . WASTE WATER ANALYSIS POLYCYCLIC AROM.
AN C 07908048993.

<608>
AU KHODOROV, E. I. VERTESHEV, M. S.
IN USSR.
YR 72.
TI ANALYSIS OF CONCENTRATION FIELDS DURING THOROUGH SUPPLEMENTARY PURIFICATION OF PHENOLIC EFFLUENTS.
SO VODOSNABZH. SANIT. TEKH. P1-4. 1972.
LG RS.
DE WASTE WATER PHENOL PURIFN.
AN C 07822140061.

<609>
AU KHOMENKO, A. N. GONCHAROVA, I. A. ZHUK, I. P.
IN USSR.
YR 76.
TI DETERMINATION OF RESORCINOL, PYROCATECHOL, AND HYDROQUINONE IN WATER BY THIN-LAYER CHROMATOGRAPHY.
SO METODY OPREDELENIYA ZAGRYAZNYAYUSHCH. VESHCHESTV V POVERKHNOST. VODAKH. P110-14. 1976.
LG RS.
DE RESORCINOL DETN SURFACE WATER CHROMATOG. PYROCATECHOL DETN SURFACE WATER CHROMATOG. HYDROQUINONE DETN SURFACE WATER CHROMATOG. CHROMATOG THIN LAYER WATER ANALYSIS.
AN C 08626194878.

<610>
AU KIEZYK, P. R. MACKAY, D.
IN DEP. CHEM. ENG. APPL. CHEM. UNIV. TORONTO. TORONTO. ONT.
YR 71.
TI WASTE WATER TREATMENT BY SOLVENT EXTRACTION.
SO CAN. J. CHEM. ENG. 49. P747-52. 1971.
LG EN.
DE REVIEW SOLVENT EXTN WASTE WATER. PHENOL REMOVAL WASTE WATER REVIEW. OIL REMOVAL WASTE WATER REVIEW.
AN C 07612063013.

<611>
AU KIEZYK, PETER R. MACKAY, DONALD.
IN DEP. CHEM. ENG. APPL. CHEM. UNIV. TORONTO. TORONTO. ONT.
YR 73.
TI SCREENING AND SELECTION OF SOLVENTS FOR THE EXTRACTION OF PHENOL FROM WATER.
SO CAN. J. CHEM. ENG. 51. P741-5. 1973.
LG EN.
DE PHENOL EXTN WASTE WATER.
AN C 08012064354.

<612>

AU KIKUCHI T. MIMURA T. KAWASHIMA Y. MORIWAKI Y. MASADA Y. INOUE T.

YR 75.

TI ODOROUS COMPOUNDS IN RAW WATER OF WATER SUPPLIES IDENTIFICATION OF CAMPHOR AND P METHYL ACETOPHENONE.

SO YAKUGAKU ZASSHI. 95 (12). (RECD 1976) 1517-1519.

DE JAPAN POLLUTION LAKES GAS CHROMATOGRAPHY MASS SPECTROMETRY.

AN B 62039987.

<613>

AU KILGORE, WENDELL W. CARLSON, ARNE E. DAGLEY, STANLEY. PIMENTEL, DAVID.

IN NATIONAL RESEARCH COUNCIL, WASHINGTON, D.C. SUBCOMMITTEE ON CHEMICAL ADDITIVES.

YR 72. 359P*.

TI DEGRADATION OF SYNTHETIC ORGANIC MOLECULES IN THE BIOSPHERE: NATURAL, PESTICIDAL, AND VARIOUS OTHER MAN-MADE COMPOUNDS.

NT PROCEEDINGS OF A CONFERENCE HELD IN SAN FRANCISCO, CALIF. 12-13 JUN 71. LIBRARY OF CONGRESS CATALOG CARD NO. 72-8844. INTERNATIONAL STANDARD BOOK NO. 0-309-02046-8.

AV PAPER COPY AVAILABLE FROM PRINTING AND PUBLISHING OFFICE OF THE NATIONAL ACADEMY OF SCIENCES, 2101 CONSTITUTION AVE. N.W. WASHINGTON, D.C. 20418, $13.95.

PR MF$0.95.

AB IN AN EFFORT TO MINIMIZE ENVIRONMENTAL POLLUTION, MANY SCIENTISTS AND RESEARCHERS ARE SEEKING TO DEVELOP MORE EFFECTIVE METHODS FOR DISPOSING OF INDUSTRIAL, DOMESTIC, AND AGRICULTURAL WASTES. THE REPORT EXPLORES THE CAPABILITIES AND LIMITATIONS OF THE PROCESS OF BIOLOGICAL DEGRADATION AS A MEANS FOR DISPOSING OF NATURAL, PESTICIDAL, AND VARIOUS OTHER MAN-MADE COMPOUNDS. THE TOPICS INCLUDE: MICROBIAL DEGRADATION OF STABLE CHEMICAL STRUCTURES; AN OUTLINE OF REACTION SEQUENCES USED FOR THE BACTERIAL DEGRADATION OF PHENOLIC COMPOUNDS; THE EVOLUTION OF METABOLIC PATHWAYS IN BACTERIA; MICROBIAL METABOLISM OF NORMAL AND BRANCHED CHAIN ALKANES; METABOLISM OF METHOXY- AND METHYLENEDIOXYPHENYL COMPOUNDS BY BACTERIA; INITIAL REACTIONS IN THE DEGRADATION OF AROMATIC HYDROCARBONS; EARLY REACTIONS IN THE DEGRADATION OF CAMPHOR: P-450(CAM) HYDROXYLASE; ENZYMOLOGY OF CARBON-HALOGEN BONDS; MICROBIAL DEGRADATION OF SOME CHLORINATED PESTICIDES; ENVIRONMENTAL FACTORS AFFECTING FATE OF PESTICIDES; ABSORPTION AND METABOLISM OF INSECTICIDE CHEMICALS IN PLANTS; DEVELOPMENT OF PERSISTENT BIODEGRADABLE INSECTICIDES RELATED TO DDT; ENVIRONMENTAL PHOTOOXIDATION OF PESTICIDES; PRINCIPLES OF PHOTODECOMPOSITION OF PESTICIDES; PARATHION IN PLANT TISSUES; THE TOXICITY OF PESTICIDES AND THEIR METABOLITES.

MJ BIODETERIORATION, ORGANIC-COMPOUNDS, PHENOLS, BIODETERIORATION, PESTICIDES, BIODETERIORATION, HALOHYDROCARBONS, BIODETERIORATION, MEETINGS, BIODETERIORATION.

MN POLLUTION, METABOLISM, BACTERIA, ALKANES, HYDROCARBONS, AROMATIC-COMPOUNDS, CAMPHOR, CHLORINE-ORGANIC- COMPOUNDS, PHOTOCHEMICAL-REACTIONS, OXIDATION, TOXICITY.

ID PARATHION, NAS.

AN N PB-218 665/8.

<614>

AU KING R F G J. BROWN S B.

YR 76.

TI HEM DEGRADATION IN DI METHYL SULFOXIDE WATER MIXTURES AND PYRIDINE WATER MIXTURES.

SO BIOCHEM SOC TRANS. 4 (2). 299-301.

DE ABSTRACT.

AN B 76083791.

<615>

AU KIPNIS, M. G. RUKIN, E. I. KUKHARENKO, T. A.

IN INST. GORYUCH. ISKOP. MOSCOW, USSR.

YR 73.

TI OXIDATION OF LIPTOBIOLITHIC COAL CONCENTRATES BY ATMOSPHERIC OXYGEN IN AN AQUEOUS-ALKALINE MEDIUM.

SO KHIM. TVERD. TOPL. P40-6. 1973.

LG RS.

DE LIPTOBIOLITH AIR OXIDN. BENZENE CARBOXYLIC ACID LIPTOBIOLITH.

AN C 07904021474.

<616>

AU KIRSO, O. UIBOPUU, H. TUULMETS, A. GUBERGRITS, M. YA. LILLE, U.

IN INST. CHEM. TALLIN. USSR.
YR 73.
TI KINETICS OF THE INITIATED OXIDATION OF SUBSTITUTED PHENOLS IN WATER.
SO REAKTS. SPOSOBNOST ORG. SOEDIN. 10. P625-36. 1973.
LG RS.
DE PHENOL OXIDN KINETICS SUBSTITUENT. PHOTOCHEM OXIDN KINETICS PHENOL.
AN C 08023132494.

<617>
AU KIRSO, U. BERNOVSKAYA, N. A. GUBERGRITS, M.
IN INST. KHIM. TALLIN. USSR.
YR 73.
TI REACTIVITY OF PHENOLS DURING BIOCHEMICAL OXIDATION IN MODELS OF WASTE WATERS.
SO KHIM. TVERD. TOPL. P100-5. 1973.
LG RS.
DE PHENOL REACTIVITY BIOL OXIDN.
AN C 07902009523.

<618>
AU KITAGAWA, HIROSHI.
IN NATL. RES. INST. POLLUT. RESOUR. JAPAN.
YR 75.
TI ADSORPTION OF PHENOL, P-NITROPHENOL, AND 2,4-DICHLOROPHENOL IN AQUEOUS SOLUTIONS BY ACTIVATED CARBON.
SO KOGAI. 10. P11-20. 1975.
LG JA.
DE PHENOL ADSORPTION ACTIVATED CARBON. NITROPHENOL ADSORPTION ACTIVATED CARBON. CHLOROPHENOL ADSORPTION ACTIVATED CARBON.
AN C 08524181906.

<619>
AU KITAZATO, HAJIME.
IN CHIYODA CHEM. ENG. AND CONSTR. CO. LTD. KAWASAKI. JAPAN.
YR 76.
TI INSTRUMENTAL METHODS OF ANALYSIS FOR WATER POLLUTION CONTROL.
SO SEKIYU GAKKAI SHI. 19. P573-7. 1976.
LG JA.
DE REVIEW WATER INSTRUMENTAL ANALYSIS. OXYGEN DEMAND DETN REVIEW. CARBON TOTAL DETN REVIEW. OIL DETN TURBIDITY REVIEW. PHENOL DETN WATER REVIEW. UV SPECTROSCOPY IR REVIEW.
AN C 08718140866.

<620>
AU KLECZKOWSKI, A. S. KURDYKA, S. STOBIERSKI, J.
IN INST. HYDROGEOL. ENG. GEOL. ACAD. MIN. METALL. CRACOW. POL.
YR 72.
TI INFLUENCE OF A CHEMICAL PLANT SEWAGE SEDIMENTATION CATCHPIT ON GROUND WATERS ON THE UPPER VISTULA FLOODPLAIN.
SO BULL. ACAD. POL. SCI. SER. SCI. TERRE. 19. P55-9. 1972.
LG EN.
DE SEDIMENTATION SEWAGE CATCHPIT EFFECT GROUNDWATER. CHLORIDE POLLUTION GROUNDWATER. SULFIDE POLLUTION GROUNDWATER. PHENOL POLLUTION GROUNDWATER. NEKAL POLLUTION GROUNDWATER.
AN C 07720130375.

<621>
AU KLEIN, E. SMITH, J. K. WEAVER, R. E. C. WENDT, R. P. DESAI, SHYAMKANT V.
IN GULF SOUTH RES. INST. NEW ORLEANS. LA.
YR 73.
TI SOLUTE SEPARATIONS FROM WATER BY DIALYSIS. II. SEPARATION OF PHENOL BY DOWNSTREAM CONJUGATION.
SO SEPAR. SCI. 8. P585-92. 1973.
LG EN.
DE DIALYSIS REMOVAL PHENOL WATER.
AN C 08012063525.

<622>
AU KLEIN, ELIAS. SMITH, J. K. WENDT, R. P. DESAI, SHYAMKANT V.
IN GULF SOUTH RES. INST. NEW ORLEANS. LA.
YR 72.
TI SOLUTE SEPARATIONS FROM WATER BY DIALYSIS. 1. SEPARATION OF ANILINE.
SO SEPAR. SCI. 7. P285-92. 1972.
LG EN.
DE DIALYSIS POLLUTED WATER PURIFN. ANILINE DIALYSIS PERMEABLE MEMBRANE. BLOCK COPOLYMERS SOLUTE SEPN. COPOLYMERS SOLUTE SEPN WATER.
AN C 07620117287.

<623>
AU KLEOPFER R D.
YR 76.
TI ANALYSIS OF DRINKING WATER FOR ORGANIC COMPOUNDS.
SO KEITH, LAWRENCE H. IDENTIFICATION

AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER. CONGRESS. MEXICO CITY, MEXICO, DEC. 1975. X+718P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40131-2. 399- 416.
DE POLLUTION OHIO RIVER MISSOURI RIVER KANSAS RIVER USA HERBICIDES BIS-2 CHLOROISOPROPYL ETHER TRI HALO METHANES CHLOROFORM CARBON ADSORPTION RESIN ADSORPTION GAS CHROMATOGRAPHY MASS SPECTROMETRY.
AN B 77007302.

<624>

AU KLERK H D E. LINDEN AC VAN DER.
YR 74.
TI BACTERIAL DEGRADATION OF CYCLOHEXANE. PARTICIPATION OF A CO-OXIDATION REACTION.
SO ANTONIE VAN LEEUWENHOEK. 40. 1. P7-15. 1974.
LG EN.
MJ CYCLOHEXANES: ME.
MN ALKANES: ME. CARBON- RADIOISOTOPES. HYDROXYLATION.
PSEUDOMONAS-AERUGINOSA: GD, ME.
AN M 74154445.

<625>

AU KLEVERLAAN, NICO T. M.
IN NETH.
YR 75.
TI GAS CHROMATOGRAPHIC DETERMINATION OF PHENOLS IN WATER.
SO CHEM. WEEKBL. 71. P13-15. 1975.
LG NE.
DE PHENOL DETN WATER. NATURAL WATER ANALYSIS PHENOL.
AN C 08304032820.

<626>

AU KNECHT, ALBERT THEODORE, JR..
IN THE LOUISIANA STATE UNIVERSITY AND AGRICULTURAL AND MECHANICAL COL. (0107) PH.D. 1961 063PP.
YR 61.
TI MICROBIAL OXIDATION OF DIBENZOTHIOPHENE AND ITS POSSIBLE APPLICATION IN THE DESULFURIZATION OF COAL AND PETROLEUM.
SO DAI V22(10) P3350.
DE BACTERIOLOGY (0301).
AN D ADGE2-01235.

<627>

AU KNOWLES C J.
YR 76.
TI MICROORGANISMS AND CYANIDE.
SO BACTERIOL REV. 40 (3). 652-680.
DE FUNGI PLANTS BACTERIA ECOLOGY POLLUTION PHYTO PATHOLOGY CYANOGENESIS.
AN B 77001029.

<628>

AU KOBAL, V. M. GIBSON, D. T. DAVIS, RAYMOND E. GARZA, A.
IN DEP. MICROBIOL. UNIV. TEXAS. AUSTIN. TEX.
YR 73.
TI X-RAY DETERMINATION OF THE ABSOLUTE STEREOCHEMISTRY OF THE INITIAL OXIDATION PRODUCT FORMED FROM TOLUENE BY PSEUDOMONAS PUTIDA 39/D.
SO J. AMER. CHEM. SOC. 95. P4420-1. 1973.
LG EN.
DE CYCLOHEXADIENEDIOL METHYL.
AN C 07910058754.

<629>

AU KOBAYASHI J. KIMURA S. AKITAKE H.
YR 76.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 7 SULFATE CONJUGATION OF PHENOL AND PENTA CHLORO PHENOL BY FISH LIVERS.
SO BULL JPN SOC SCI FISH. 42 (2). 171-177.
DE CARASSIUS-AURATUS CYPRINUS- CARPIO SALMO-GAIRDNERI-IRIDEUS TAPES-PHILIPPINARUM PANULIRUS-JAPONICUS RADIOACTIVITY.
AN B 62034751.

<630>

AU KOBAYASHI K. AKITAKE H.
YR 75.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 4 ABSORPTION AND EXCRETION OF PHENOL BY GOLDFISH.
SO BULL JPN SOC SCI FISH. 41 (12). (RECD 1976) 1271-1276.
DE CARASSIUS-AURATUS POLLUTANT PENTA CHLORO PHENOL.
AN B 62017319.

<631>

AU KOBAYASHI K. AKITAKE H.
YR 75.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 2 TURNOVER OF ABSORBED PENTA CHLORO PHENOL IN

GOLDFISH.
SO BULL JPN SOC SCI FISH. 41 (1). 93-100.
DE CARASSIUS-AURATUS GALLBLADDER HEPATO PANCREAS DE TOXIFICATION CONJUGATION DECOMPOSITION ACTIVE ELIMINATION.
AN B 60028834.

<632>
AU KOBAYASHI K. AKITAKE H.
YR 75.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 1 ABSORPTION AND EXCRETION OF PENTA CHLORO PHENOL BY GOLDFISH.
SO BULL JPN SOC SCI FISH. 41 (1). 87-92.
DE CARASSIUS-AURATUS HERBICIDE ACTIVE ELIMINATION DECOMPOSITION.
AN B 60028833.

<633>
AU KOBAYASHI K. AKITAKE H. KIMURA S.
YR 76.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 6 TURNOVER OF ABSORBED PHENOL IN GOLDFISH.
SO BULL JPN SOC SCI FISH. 42 (1). 45-50.
DE CARASSIUS-AURATUS GALLBLADDER BILIARY EXCRETION LIVER SULFATE CONJUGATION DE TOXICATION PENTA CHLORO PHENOL.
AN B 62023043.

<634>
AU KOBAYASHI K. AKITAKE H. MATSUDA C. KIMURA S.
YR 75.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 5 ISOLATION AND IDENTIFICATION OF A CONJUGATED PHENOL EXCRETED BY GOLDFISH.
SO BULL JPN SOC SCI FISH. 41 (12). (RECD 1976) 1277-1282.
DE CARASSIUS-AURATUS DE TOXICATION MECHANISM UV ABSORPTION SPECTRA THIN LAYER CHROMATOGRAPHY SEPHADEX COLUMN.
AN B 62017320.

<635>
AU KOBAYASHI K. KIMURA S. SHIMIZU E.
IN LAB. FISH. CHEM. FAC. AGRIC. KYUSHU UNIV. FUKUOKA, JPN.
YR 77.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 9 ISOLATION AND IDENTIFICATION OF PENTA CHLOROPHENYL BETA GLUCURONIDE ACCUMULATED IN BILE OF GOLDFISH.
SO BULL JPN SOC SCI FISH. 43 (5). 601-608.
LG EN.
DE CARASSIUS-AURATUS HERBICIDE.
AN B 65012183.

<636>
AU KOBAYASHI K. KIMURA S. SHIMIZU E.
YR 76.
TI STUDIES ON THE METABOLISM OF CHLORO PHENOLS IN FISH PART 8 ISOLATION AND IDENTIFICATION OF PHENYL BETA GLUCURONIDE ACCUMULATED IN BILE OF GOLDFISH.
SO BULL JPN SOC SCI FISH. 42 (12). (RECD 1977) 1365-1372.
DE CARASSIUS-AURATUS.
AN B 64030041.

<637>
AU KOBAYASHI, TOSHIO. MORI, KAZUYOSHI.
IN FAC. AGRIC. KYOTO UNIV. KYOTO. JAPAN.
YR 73.
TI OCCURRENCE OF TOXICITY TO FISHES BY PHOTODECOMPOSITION OF COMPLEX CYANIDES.
SO MIZU SHORI GIJUTSU. 14. P575-9. 1973.
LG JA.
DE CYANIDE TOXICITY FISH.
AN C 07923133424.

<638>
AU KODAMA K. UMEHARA K. SHIMIZU K. NAKATANI S. MINODA Y. YAMADA K.
YR 73.
TI IDENTIFICATION OF MICROBIAL PRODUCTS FROM DI BENZOTHIOPHENE AND ITS PROPOSED OXIDATION PATHWAY.
SO AGRIC BIOL CHEM. 37 (1). 45-50.
DE PSEUDOMONAS-ABIKONENSIS PSEUDOMONAS-JIANII RICE.
AN B 56066207.

<639>
AU KODAMA, TAKENORI. KOBAYASHI, KOSHI. EBA, HIROKI. OGAWA, TSUTOMU. TAKAI, YOSHIHARU. NAITO, NAOKI. OKADA, NOBORU. SAWANO, YOSHIHIKO.
IN POLLUT. RES. CENT. JAPAN.
YR 75.
TI DETERMINATION OF PHTHALIC ACID

ESTERS (PAE). VIII. PAE IN AICHI PREFECTURE.
SO KOGAI TO TAISAKU. 11. P341-5. 1975.
LG JA.
DE PHTHALIC ACID ESTER DETN WATER.
AN C 08412079472.

<640>

AU KODAMA, TAKENORI. TAKAI, YOSHIHARU.
IN POLLUT. INVEST. CENT. AICHI. JAPAN.
YR 74.
TI DETERMINATION OF PHTHALIC ACID ESTER (PAE). IV. DETERMINATION OF PAE IN FISH MEATS.
SO KOGAI TO TAISAKU. 10. P850-2. 1974.
LG JA.
DE PHTHALATE DETN FISH. FISH PHTHALATE DETN. CHROMATOG PHTHALATE. GAS CHROMATOG PHTHALATE.
AN C 08319162258.

<641>

AU KODAMA, TAKENORI. TAKAI, YOSHIHARU.
IN AICHI PREFECT. POLLUT. RES. CENT. AICHI. JAPAN.
YR 74.
TI DETERMINATION OF PHTHALIC ACID ESTERS IN WATER.
SO KOGAI TO TAISAKU. 10. P488-92. 1974.
LG JA.
DE PHTHALIC ACID ESTER DETN WATER.
AN C 08206034890.

<642>

AU KOELLE W. KOPPE P. SONTHEIMER H.
YR 70.
TI TASTE AND ODOR PROBLEMS WITH THE RIVER RHINE.
SO WATER TREAT EXAM. 19 (2). 120-135.
DE MICROORGANISMS GERMANY SEWAGE TEMPERATURE ORGANIC POLLUTANTS ACTIVATED CARBON CARBON TETRA CHLORIDE BENZENE BIOLOGICAL OXIDATION CHLORINATED HYDRO CARBON CHROMATOGRAPHY.
AN B 53040200.

<643>

AU KOELLE W. STIEGLITZ L.
YR 75.
TI PETROCHEMICAL AND BIOGENIC HYDRO CARBONS IN THE SEDIMENT OF LAKE CONSTANCE.
SO HUSMANN, W. (ED.). VOM WASSER, BAND 43. (ON WATER, VOL. 43.). (IN GER.). VIII+584P. ILLUS. VERLAG CHEMIE: WEINHEIM, WEST GERMANY. ISBN 3-527-25594-X. 161-177.
DE WEST GERMANY AUSTRIA SWITZERLAND BOATING POLLUTION ALKYL BENZENES BI PHENYL TETRA CHLORO BENZENE DDE HEXA CHLORO BENZENE POLY CHLORINATED BI PHENYLS RADIO CARBON.
AN B 75094652.

<644>

AU KOENST W M. SMITH L L JR. BRODERIUS S J.
IN DEP. ENTOMOL. FISH WILDL. UNIV. MINN. ST. PAUL MINN. 55108, USA.
YR 77.
TI EFFECT OF CHRONIC EXPOSURE OF BROOK TROUT TO SUBLETHAL CONCENTRATIONS OF HYDROGEN CYANIDE.
SO ENVIRON SCI TECHNOL. 11 (9). 883-887.
LG EN.
DE SALVELINUS-FONTINALIS GROWTH REPRODUCTION.
AN B 65012178.

<645>

AU KOESSLER F. WOLBURG I.
YR 71.
TI METABOLIC FUNCTIONS OF MICROORGANISMS AS INDICATORS FOR TOXIC SUBSTANCES.
SO Z GESAMTE HYG GRENZGEB. 17 (5). 317-321.
DE VIBRIO-LUMINOSUS XYLENE TOLUENE BENZENE NITRO BENZENE MONO CHLORO BENZENE DEMEPHION METHYL PARATHION.
AN B 53034630.

<646>

AU KOLCHINS'KA I D. KVASNIKOV E I.
YR 73.
TI OXIDATION OF HYDRO CARBONS BY SOME BACTERIA OF THE GENERA PSEUDOMONAS AND BACILLUS.
SO MIKROBIOL ZH (KIEV). 35 (3). 279-284.
DE PARAFFIN HEXA DECANE ALPHA OLEFINS PROTEINASE PRODUCTION CARBON SOURCE.
AN B 59048826.

<647>

AU KOMORI, MASAKI. URANO, KOHEI. NAKAI, TOSHIHIRO.
IN WATER POLLUT. CONTROL DIV. NATL. RES. INST. POLLUT. RESOUR. TOKYO. JAPAN.
YR 74.
TI ADSORBABILITY OF SUBSTITUTED BENZOIC

ACIDS ON ACTIVATED CARBON IN AQUEOUS SOLUTIONS.
SO NIPPON KAGAKU KAISHI. P1795-9. 1974.
LG JA.
DE BENZOIC ACID DERIV ADSORPTION CARBON.
AN C 08124159438.

<648>
AU KOMSKII M S. BOGATSKII M A.
YR 73.
TI GAS LIQUID CHROMATOGRAPHIC DETERMINATION OF BUTYL ACETATE BUTANOL AND ACETONE PRESENT TOGETHER IN WASTE WATERS.
SO GIG SANIT. 38 (9). 70-71.
AN B 58045995.

<649>
AU KONDRAT'EVA, M. M. LISUNOVA, Z. S.
IN USSR.
YR 71.
TI FORMATION OF PHENOLS IN WASTE WATERS OF RAILROAD PLANTS.
SO NAUCH. TR. OMSK. INST. INZH. ZHELEZ.-DOROZH. TRANSP. 124. P13-20. 1971.
LG RS.
DE WASTE WATER PHENOL POLLUTION.
AN C 07822140115.

<650>
AU KONDRATYUK, V. A.
IN TERNOPOL. MED. INST. TERNOPOL. USSR.
YR 74.
TI EFFECT OF PYRIDINE DISSOLVED IN WATER ON THE MUCOUS MEMBRANE OF THE STOMACH AND INTESTINES OF EXPERIMENTAL ANIMALS.
SO GIG. SANIT. P87-8. 1974.
LG RS.
DE PYRIDINE TOXICITY CALCIUM STOMACH. MAGNESIUM PYRIDINE TOXICITY STOMACH. INTESTINE PYRIDINE CALCIUM TOXICITY. WATER MINERAL PYRIDINE TOXICITY.
AN C 08219119705.

<651>
AU KONGIEL-CHABLO I.
YR 76.
TI EFFECT OF PHENOL DECOMPOSITION PRODUCTS IN CHLORINATED WATER ON ANIMAL BODIES.
TR WP+YW PRODUKTOW ROZK+ADU FENOLU W WODZIE CHLOROWANEJ NA ORGANIZM ZWIERZ■ECY.
SO ROCZ PANSTW ZAKL HIG. 27. 6. P673-8. 1976.
LG PO.
MJ CHLORINE.
MN ANIMAL.
AN M 77080524. 7704.

<652>
AU KOPPERMAN H L. CARLSON R M. CAPLE R.
YR 74.
TI AQUEOUS CHLORINATION AND OZONATION STUDIES PART 1 STRUCTURE TOXICITY CORRELATIONS OF PHENOLIC COMPOUNDS TO DAPHNIA-MAGNA.
SO CHEM-BIOL INTERACT. 9 (4). 245- 251.
DE FIELD RESONANCE BIOLOGICAL ACTIVITY.
AN B 59058076.

<653>
AU KORENMAN, I. M. GUREVICH, N. YU. KULAGINA, T. G.
IN GOR'K. GOS. UNIV. GORKI. USSR.
YR 73.
TI EXTRACTION OF SOME N-ALKYLAMINES FROM AQUEOUS SOLUTIONS.
SO ZH. PRIKL. KHIM. (LENINGRAD). 46. P683-4. 1973.
LG RS.
DE PARTITION ALKYLAMINE WATER ORG. ETHYLAMINE PARTITION WATER ORG. PROPYLAMINE PARTITION WATER ORG. BUTYLAMINE PARTITION WATER ORG. HYDROGEN BOND AMINE.
AN C 07826164884.

<654>
AU KORENMAN, I. M. KARYAKINA, L. N.
IN USSR.
YR 71.
TI EFFECT OF ORGANIC SOLVENT NATURE ON THE EXTRACTION OF NAPHTHYLAMINES .
SO TR. KHIM. KHIM. TEKHNOL. P32-5. 1971.
LG RS.
DE EXTN NAPHTHYLAMINE ORG WATER. LIQ CLASSIFICATION EXTN.
AN C 07722144395.

<655>
AU KORENMAN, I. M. KOCHETKOVA, T. M.
IN USSR.
YR 70.
TI EXTRACTION OF TOLUIDINES FROM AQUEOUS SOLUTIONS OF ORGANIC NONELECTROLYTES.
SO TR. KHIM. KHIM. TEKHNOL. P148- 52. 1970.

LG RS.
DE TOLUIDINE EXTN ORG NONELECTROLYTE.
AN C 07624145489.

<656>
AU KORENMAN, I. M. LIZUNOVA, G. M.
SALYAKAEVA, F. I.
IN USSR.
YR 73.
TI EXTRACTION OF ANILINE FROM AQUEOUS
SALT SOLUTIONS.
SO TR. KHIM. KHIM. TEKHNOL. P126-7.
1973.
LG RS.
DE ANILINE SALTING OUT ALKALI SALT.
BENZENE EXTN ANILINE AQ SALT.
AN C 08110054886.

<657>
AU KORENMAN, YA. I.
IN USSR.
YR 74.
TI EXTRACTION OF HYDROQUINONE FROM
AQUEOUS SOLUTIONS.
SO ZH. PRIKL. KHIM. (LENINGRAD). 47.
P1816-19. 1974.
LG RS.
DE SALT EFFECT HYDROQUINONE EXTN.
HYDROQUINONE EXTN ORG SOLVENT.
HEPTANOL EXTN HYDROQUINONE.
AN C 08124159772.

<658>
AU KORENMAN, YA. I.
IN USSR.
YR 73.
TI EXTRACTION OF CRESOLS FROM AQUEOUS
SOLUTIONS.
SO TR. KHIM. KHIM. TEKHNOL. P136-7.
1973.
LG RS.
DE CRESOL EXTN AQ ORG SOLVENT. ALC EXTN
CRESOL. BENZENE DERIV EXTN CRESOL.
PHENOL EXTN AQ ORG SOLVENT.
AN C 08110054890.

<659>
AU KORENMAN, YA. I.
IN USSR.
YR 73.
TI EXTRACTION OF GUAIACOL FROM AQUEOUS
SOLUTIONS.
SO ZH. PRIKL. KHIM. (LENINGRAD). 46.
P1305-9. 1973.
LG RS.
DE GUAIACOL EXTN ORG SOLVENT. ALC EXTN
GUAIACOL WATER. CHLOROFORM EXTN
GUAIACOL WATER. NITROBENZENE EXTN
GUAIACOL WATER.
AN C 07920118901.

<660>
AU KORENMAN, YA. I.
IN GOR'K. S.-KH. INST. GORKI. USSR.
YR 71.
TI INTERFACIAL TENSION AND EXTRACTION
OF PHENOLS.
SO ZH. FIZ. KHIM. 45. P2923-4. 1971.
LG RS.
DE PHENOL WATER SOLVENT DISTRIBUTION.
ETHYLPHENOL WATER SOLVENT
DISTRIBUTION. XYLENOL WATER SOLVENT
DISTRIBUTION. WATER SOLVENT PHENOL
DISTRIBUTION.
AN C 07612064088.

<661>
AU KORENMAN, YA. I. BUTYAEVA, I. I.
GEL'FAND, M. M.
IN USSR.
YR 74.
TI EXTRACTION OF NAPHTHOLS FROM AQUEOUS
SOLUTIONS.
SO ZH. PRIKL. KHIM. (LENINGRAD). 47.
P473-5. 1974.
LG RS.
DE EXTN NAPHTHOL AQ SOLN. SOLVENT ORG
EXTN NAPHTHOL. ACETATE ESTER EXTN
NAPHTHOL. ALC EXTN NAPHTHOL. BENZENE
DERIV EXTN NAPHTHOL. ALKANE EXTN
NAPHTHOL.
AN C 08108042082.

<662>
AU KORENMAN, YA. I. GOROKHOV, A. A.
BOBROV, O. G.
IN GOR'K. S-KH. INST. GORKI. USSR.
YR 76.
TI EXTRACTION DETERMINATION OF PHENOL
AND DIPHENYLOLPROPANE IN WASTE
WATERS.
SO ZAVOD. LAB. 42. P519-20. 1976.
LG RS.
DE PHENOL DETN WASTEWATER.
PHENYLOLPROPANE DETN WASTEWATER.
AN C 08526197596.

<663>
AU KORENMAN, YA. I. KARELINA, L. S.
IN USSR.
YR 70.
TI EXTRACTION STUDY OF MOLECULAR
COMPLEXES OF PHENOL IN AQUEOUS
SOLUTIONS.

SO TR. KHIM. KHIM. TEKHNOL. P85-8. 1970.
LG RS.
DE PHENOL MOL COMPLEXES EXTN.
AN C 07514091711.

<664>

AU KORENMAN, YA. I. PERESHEIN, V. V.
IN USSR.
YR 71.
TI EXTRACTION OF P-CRESOL FROM AQUEOUS SOLUTIONS.
SO TR. KHIM. KHIM. TEKHNOL. P69-73. 1971.
LG RS.
DE EXTN CRESOL AQ SOLN. PHENOL CRESOL EXTN. SOLVENT PROPERTY CRESOL EXTN . LIQ CLASSIFICATION EXTN.
AN C 07722144397.

<665>

AU KORENMAN, YA. I. PERESHEIN, V. V.
IN GOR'K. SEL'SKOKHOZ. INST. GORKI. USSR.
YR 70.
TI EXTRACTION OF O-CRESOL FROM AQUEOUS SOLUTIONS.
SO ZH. PRIKL. KHIM. (LENINGRAD). 43. P1410-12. 1970.
LG RS.
DE CRESOLS EXTN. EXTN CRESOLS. HYDROCARBONS CRESOLS EXTN. SOLVENTS EXTN CRESOLS.
AN C 07322113526.

<666>

AU KORENMAN, YA. I. PLATONOVA, T. K.
IN USSR.
YR 69.
TI EXTRACTION OF P-ETHYLPHENOL FROM AQUEOUS SOLUTIONS.
SO TR. KHIM. KHIM. TEKHNOL. P116- 20. 1969.
LG RS.
DE EXTN ETHYLPHENOLS. ETHYLPHENOLS EXTN.
AN C 07320102544.

<667>

AU KORENMAN, YA. I. SOTNIKOVA, N. G.
IN GOR'K. S.-KH. INST. GORKI. USSR.
YR 72.
TI EXTRACTION STUDY OF MOLECULAR COMPLEXES OF SALICYLALDEHYDE IN AQUEOUS SOLUTIONS.
SO ZH. STRUKT. KHIM. 13. P1003-7. 1972.
LG RS.
DE SALICYLALDEHYDE ORG COMPLEX. ISOPROPANOL SALICYLALDEHYDE COMPLEX. ETHYLENE GLYCOL SALICYLALDEHYDE COMPLEX. CITRIC ACID SALICYLALDEHYDE COMPLEX. BENZENESULFONATE SALICYLALDEHYDE COMPLEX. TOLUENESULFONIC ACID SALICYLALDEHYDE COMPLEX. ACETONE SALICYLALDEHYDE COMPLEX. DIOXANE SALICYLALDEHYDE COMPLEX.
AN C 07814089108.

<668>

AU KORN, SID. STRUHSAKER, JEANNETTE W. BENVILLE, PETE, JR.
IN SOUTHWEST FISH. CENT. NOAA. TIBURON. CALIF.
YR 76.
TI EFFECTS OF BENZENE ON GROWTH, FAT CONTENT, AND CALORIC CONTENT OF STRIPED BASS, MORONE SAXATILIS.
SO FISH. BULL. 74. P694-8. 1976.
LG EN.
DE BENZENE TOXICITY FISH. WATER POLLUTION BENZENE FISH. PETROLEUM WATER POLLUTION FISH.
AN C 08523172405.

<669>

AU KOROLEV A A.
YR 72.
TI OZONE TREATMENT AS A METHOD OF PURIFYING WATER POLLUTED WITH CHEMICAL COMPOUNDS.
TR OZONIROVANIE KAK METOD OBEZVREZHIVANIIA VODY, ZAGRIAZNENNOI KHIMICHESKIMI SOEDINENIIAMI.
SO GIG SANIT. 37. 12. P78-83. DEC 72.
LG RS.
MJ INDUSTRIAL-WASTE.
MN BENZOPYRENES. INSECTICIDES-ORGANOPHOSPHATE. SURFACE-ACTIVE-AGENTS.
AN M 73131360.

<670>

AU KOROLEV, A. A. ABINDER, A. A. BOGDANOV, M. V. ZAKHAROVA, T. A. KHITROV, N. K.
IN ENVIRONMENTAL PROTECTION AGENCY, RESEARCH TRIANGLE PARK, N.C. TRANSLATION SERVICES SECTION.
YR 73. 8P.
TI HYGIENIC AND TOXICOLOGICAL CHARACTERISTICS OF BREAKDOWN PRODUCTS OF PHENOL IN THE OZONE TREATMENT OF WATER (GIGIENICHESKAYA I TOKSIKOLOGICHESKAYA

KHARAKTERISTIKA PRODUKTOV DESTRUKTSII FENOLA PRI OZONIROVANII VODY).
NT TRANS. OF GIGIENA I SANITARIYA (USSR) V38 N8 P6-10 AUG 73.
PR PC$3.25/MF$2.25.
AB ALL TESTED PHENOLS ARE EASILY OXIDIZED BY OZONE, AS THE RESULT OF WHICH THE ORGANOLEPTIC PROPERTIES OF WATER CONTAMINATED BY THESE SUBSTANCES ARE SIGNIFICANTLY IMPROVED. THE PRODUCTS OF ADVANCED OXIDATION OF PHENOLS BY OZONE ARE PRACTICALLY NONTOXIC AND NONCUMULATIVE. THE OZONIZATION METHOD CAN BE RECOMMENDED FOR WIDE USE TO PURIFY DRINKING WATER AND SEWAGE CONTAMINATED BY PHENOLS.
MJ TOXICOLOGY, OZONIZATION, WATER-TREATMENT, PHENOLS.
MN POTABLE-WATER, HYGIENE, USSR, TRANSLATIONS, RECOMMENDATIONS, SEWAGE-TREATMENT, OXIDATION, DECOMPOSITION.
ID NTISEPAISD.
AN N PB-237 917-T/SL.

<671>
AU KOSHITANI, ZINYA. UENO, TOSHIO. YOSHIDA, TAKATOSHI. SUZUKI, MASAKAZU.
IN NAGOYA INST. TECHNOL. NAGOYA. JAPAN.
YR 73.
TI OXIDATION OF HYDROQUINONE BY OXYGEN IN AQUEOUS SOLUTIONS AND IN ORGANIC SOLVENTS.
SO NAGOYA KOGYO DAIGAKU GAKUHO. 25. P413-8. 1973.
LG JA.
DE AUTOXIDN HYDROQUINONE KINETICS. SOLVENT EFFECT AUTOXIDN HYDROQUINONE .
AN C 08221138933.

<672>
AU KOSINKIEWICZ B. STANKIEWICZ M.
YR 75.
TI THE EFFECT OF MICROORGANISMS ON PHYTO TOXICITY OF HERBICIDES PART 2 INCREASE OF PHYTO TOXICITY OF VENZAR IN THE PRESENCE OF PHENOLIC COMPOUNDS PRODUCED BY PSEUDOMONAS-SP.
SO ACTA MICROBIOL POL SER B MICROBIOL APPL. 7 (1). 15-23.
DE SINAPIS-ALBA CHLORELLA-VULGARIS PHYTO TOXICITY.
AN B 61017305.

<673>
AU KOSSLER F. WOLBURG I.
YR 71.
TI METABOLIC FUNCTIONS OF MICROORGANISMS AS INDICATORS OF TOXIC SUBSTANCES.
TR STOFFWECHSELFUNKTIONEN VON MIKROORGANISMEN ALS INDIKATOREN FUR TOXISCHE SUBSTANZEN.
SO Z GESAMTE HYG. 17. 5. P317-21. MAY 71.
LG GE.
MJ BACTERIA: DE, ME.
MN BACTERIOLOGICAL-TECHNICS. BIOLOGICAL-ASSAY.
AN M 72049856.

<674>
AU KOSTROMIN, N. P. SARAEVA, V. V.
IN USSR.
YR 74.
TI RADIATION-CHEMICAL OXIDATION OF 3-PICOLINE IN AQUEOUS SOLUTIONS.
SO VESTN. MOSK. UNIV. KHIM. 15. P755. 1974.
LG RS.
DE PICOLINE PHOTOCHEM OXIDN.
AN C 08225170627.

<675>
AU KOSTROMIN, N. P. SARAEVA, V. V.
IN MOSK. GOS. UNIV. IM. LOMONOSOVA. MOSCOW. USSR.
YR 75.
TI KINETICS OF THE RADIATION- CHEMICAL OXIDATION OF PYRIDINE IN AQUEOUS SOLUTIONS.
SO KHIM. VYS. ENERG. 9. P34-8. 1975.
LG RS.
DE PYRIDINE OXIDN X RAY.
AN C 08215097420.

<676>
AU KOSTROMIN, N. P. SARAEVA, V. V.
IN MOSK. GOS. UNIV. MOSCOW. USSR.
YR 74.
TI DETERMINATION OF PRODUCTS OF RADIATION-CHEMICAL OXIDATION OF PYRIDINE IN AQUEOUS SOLUTION.
SO VESTN. MOSK. UNIV. KHIM. 15. P472-4. 1974.
LG RS.
DE HYDROXYLATION PYRIDINE RADIOCHEM. IRRADN PYRIDINE HYDROXYLATION. HYDROXYPYRIDINE. OXIDE PYRIDINE.
AN C 08205031222.

<677>

AU KOSTROMIN, N. P. SILANT'EV, A. I. SARAEVA, V. V.
IN MOSK. GOS. UNIV. IM. LOMONOSOVA. MOSCOW. USSR.
YR 77.
TI RADIATIVE-CHEMICAL OXIDATION OF 3-PICOLINE IN AQUEOUS SOLUTIONS.
SO KHIM. VYS. ENERG. 11. P81-2. 1977.
LG RS.
DE PICOLINE IRRADN OXIDN.
AN C 08619139793.

<678>

AU KOSTYAEV, V. YA.
IN USSR.
YR 73.
TI INFLUENCE OF PHENOL ON THE HYDROCHEMICAL REGIME, PHYTOPLANKTON, AND PHYTOFOULING OF EXPERIMENTAL WATER BODIES.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P119-51. 1973.
LG RS.
DE PHENOL POLLUTION WATER BIOTA.
AN C 08016087250.

<679>

AU KOSTYAEV, V. YA.
IN USSR.
YR 73.
TI EFFECT OF PHENOL ON ALGAE.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P98-113. 1973.
LG RS.
DE PHENOL TOXICITY ALGAE. PHOTOSYNTHESIS ALGAE PHENOL.
AN C 08015078930.

<680>

AU KOSTYAEV, V. YA.
YR 73. 10P.
TI PATTERN OF PHENOL DEGRADATION IN THE VOLGA AND ITS TRIBUTARIES.
AV TRANSLATION.
PR PC$3.50/MF$2.25.
AB METHODS ARE DESCRIBED FOR TAKING WATER SAMPLES AND MAKING PHENOL DETERMINATIONS. STUDIES WERE MADE ON THE RATE OF PHENOL DESTRUCTION, EFFECTS OF ADDED NITROGEN AND PHOSPHORUS SALTS ON PHENOL DESTRUCTION RATE, AND EFFECTS OF LIGHT ON PHENOL DESTRUCTION. RESULTS SHOWED THAT NEITHER A DECREASE IN THE PH OF THE WATER NOR A DECREASE IN OXYGEN CONCENTRATION LEAD TO DESTRUCTION OF THE TOXICANT; ONLY ADDITION OF NITROGEN AND PHOSPHORUS CAUSED RAPID DESTRUCTION. IT WAS CONCLUDED THAT IF ALGAE AND OTHER PLANTS RELEASE ANTIBIOTICS, THEY DO NOT AFFECT THE PHENOL-DESTROYING BACTERIA UNFAVORABLY.
MJ PHENOLS, DECOMPOSITION.
MN ALGAE, ANTIBIOTICS, BACTERIA, OXYGEN, PLANTS, SAMPLING, VISIBLE-RADIATION, VOLGA-RIVER, WATER.
ID ERDA-520200, TRANSLATIONS, USSR, BIODEGRADATION, NUTRIENTS, WATER-POLLUTION, NTISERDA.
AN N ORNL-TR-2935.

<681>

AU KOSTYAEV, V. YA.
YR 73. 69P.
TI EFFECT OF PHENOL ON THE HYDROCHEMICAL REGIME, PHYTOPLANKTON, AND PLANT OVERGROWTH IN ARTIFICIAL BODIES OF WATER.
AV TRANSLATED FROM TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR.
PR PC$4.50/MF$2.25.
AB THE EFFECTS OF THE ADDITION OF VARIOUS AMOUNTS OF PHENOL COMPOUNDS ON THE GROWTH OF ALGAE IN LARGE TANKS FILLED WITH RIVER WATER WERE STUDIED. THE DEPOSITION OF PHENOLS IN SEDIMENTS AND THE DECOMPOSITION OF PHENOLS BY BACTERIA WERE OBSERVED.
MJ AQUATIC-ECOSYSTEMS, WATER-POLLUTION, PHENOLS, TOXICITY, ALGAE, PLANT-GROWTH.
MN BACTERIA, DECOMPOSITION, ENVIRONMENT, FRESH-WATER, SEDIMENTS, TIME-DEPENDENCE.
ID ERDA-520200, ERDA-560303, NTISERDA.
AN N ORNL-TR-2934.

<682>

AU KOSTYAEV, V. YA. BARONKINA, L. A.
YR 73. 9P.
TI DECOMPOSITION OF PHENOL IN VARIOUS MEDIA.
PR PC$3.50/MF$2.25.
AB IN ORDER TO DECOMPOSE LARGE CONCENTRATIONS OF PHENOL A HIGHER BACTERIAL ACTIVITY IS REQUIRED WHICH, UNDER OTHERWISE EQUAL CONDITIONS, DEPENDS ON THE CONCENTRATION OF BIOGENIC ELEMENTS IN THE MEDIUM (N,P). THE TAMIIYA MEDIUM IN THIS RESPECT EXCEEDS THE CHU NO. 10 MEDIUM BY A FACTOR OF 10, AND THIS HIGHER CONCENTRATION OF BIOGENIC ELEMENTS IN THE TAMIIYA

MEDIUM DETERMINES THE HIGHER RATE OF DECOMPOSITION AT HIGHER PHENOL CONCENTRATIONS.
MJ PHENOLS, DECOMPOSITION, BACTERIA, METABOLISM.
MN BIOCHEMICAL-REACTION-KINETICS, CULTURE-MEDIA.
ID ERDA-400301, ERDA-510100, NTISERDA.
AN N ORNL-TR-2937.

<683>
AU KOSTYAEV, V. YA. LAPTEVA, N. A. MIKRYAKOVA, T. V. BARONKINA, L. A. ZHUKOV, B. A. GORYACHEVA, N. B. ZAKHAROVA, L. I.
IN USSR.
YR 73.
TI DEGRADATION OF PHENOL IN ARTIFICIAL WATER BODIES. EXPERIMENTS IN 1970 .
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P159-66. 1973.
LG RS.
DE PHENOL POLLUTION FRESHWATER MICROFLORA. BIODEGRDN PHENOL FRESHWATER.
AN C 08014074024.

<684>
AU KOTLYAR, S. G.
IN USSR.
YR 75.
TI EFFECT OF FORMALDEHYDE ON THE CHEMICAL PROPERTIES OF WATER AND THE BIOCHEMICAL PROCESSES OCCURRING IN A RESERVOIR.
SO TR. SARATOV. OTD. NII OZ. I RECH. RYB. KH-VA. P12-13. 1975.
LG RS.
DE FORMALDEHYDE WATER POLLUTION.
AN C 08426184747.

<685>
AU KOVACHEV, S. UZUNOV, I.
IN ZOOL. INST. SOFIA. BULG.
YR 75.
TI TOXIC EFFECT OF PHENOL ON SEVERAL FRESH WATER INVERTEBRATES.
SO KHIDROBIOLOGIYA. 1. P65-74. 1975.
LG BU.
DE PHENOL TOXICITY FRESHWATER INVERTEBRATE. OLIGOCHAETE PHENOL RESISTANCE. AMPHIPOD PHENOL RESISTANCE. ISOPOD PHENOL RESISTANCE. INSECT LARVAE PHENOL RESISTANCE. SAPROBIC ORGANISM PHENOL TOXICITY.
AN C 08525187331.

<686>
AU KOYAMA, AKIRA.
IN JAPAN.
YR 72.
TI ENVIRONMENTAL POLLUTION BY CONCENTRATED CYANIDE SOLUTIONS AND COUNTERMEASURES AGAINST THE POLLUTION.
SO JITSUMU HYOMEN GIJUTSU. P193-9. 1972.
LG JA.
DE REVIEW CYANIDE DISPOSAL WASTE WATER.
AN C 07706038801.

<687>
AU KOZITSKAYA, V. N.
IN INST. GIDROBIOL. KIEV. USSR.
YR 71.
TI SOURCES OF PHENOL ACCUMULATION IN RESERVOIRS OF THE DNIEPER CASCADE.
SO GIDROBIOL. ZH. 7. P57-62. 1971.
LG RS.
DE PHENOL WATER RESERVOIR. BLUE GREEN ALGAE PHENOL RESERVOIR. BLOOMING ALGAE PHENOL RESERVOIR.
AN C 07604017697.

<688>
AU KOZYUKINA ZH T.
YR 75.
TI INCREASE IN GAS RESISTANCE AND PHENOL ACCUMULATING ABILITY OF PLANTS UNDER CONDITIONS OF AN INDUSTRIAL MEDIUM.
SO UKR BOT ZH. 32 (3). 367-370.
DE DACTYLIS-GLOMERATA SYRINGA- VULGARIS PSEUDOBACTERIUM-LACTICUM PSEUDOMONAS-LIQUEFACIENS HUMUS MIXTURE AIR POLLUTION BACTERIAL FERTILIZERS.
AN B 61060455.

<689>
AU KRAMER, URS. BHATIA, KISHAN.
IN MELLON INST. SCI. CARNEGIE- MELLON UNIV. PITTSBURGH. PA.
YR 74.
TI DETERMINATION OF TRACE PHENOL AND ISOMERIC HYDROXYBENZOIC ACIDS IN AQUEOUS BENZOIC ACID SOLUTIONS BY AQUEOUS LIQUID CHROMATOGRAPHY.
SO J. CHROMATOGR. 89. P348-9. 1974.
LG EN.
DE HYDROXYBENZOIC ACID DETN. PHENOL DETN BENZOIC ACID PHOTOOXIDN. OXIDN BENZOIC ACID PRODUCT ANALYSIS. CHROMATOG BENZOIC ACID OXIDN PRODUCT. RADIOLYSIS BENZOIC ACID

OXIDN PRODUCT.
AN C 08020115802.

<690>

AU KREMMER, A. M. KNYAZEVA, G. V. SAMSONOVA, L. M.
IN USSR.
YR 72.
TI DETERMINATION OF COMPONENTS OF BITUMENS AND BENZENE IN SUBSURFACE WATERS.
SO VOP. ORG. GEOKHIM. GIDROGEOL. NEFTEGAZONOS. BASSEINOV UZB. NO. 4. P244-50. 1972.
LG RS.
DE BITUMEN DETN SUBSURFACE WATER. BENZENE DETN SUBSURFACE WATER. WATER ANALYSIS BITUMEN BENZENE.
AN C 07924139585.

<691>

AU KRESHKOV, A. P. BALYATINSKAYA, L. N. SOMOVA, V. G. VASILEVA, S. V.
IN USSR.
YR 73.
TI DETERMINATION OF PHENOL AND WATER IN PHENOL-FORMALDEHYDE RESINS IN A MEDIUM OF NONAQUEOUS SOLVENTS.
SO PLAST. MASSY. P66-8. 1973.
LG RS.
DE PHENOL DETN PHENOLIC RESIN. WATER DETN PHENOLIC RESIN. FORMALDEHYDE PHENOL RESIN ANALYSIS.
AN C 07908043146.

<692>

AU KRISHNA PRASAD, S B S. SRINIVASA RAO, M. RAO, T S.
IN ANDHRA UNIV. COLLEGE OF ENGINEERING, WALTAIR, INDIA.
YR 75.
TI MEDIAN TOLERANCE LIMITS OF SOME CHEMICALS TO THE FRESH WATER FISH CYPRINUS CARPIO.
SO INDIAN JOURNAL OF ENVIRONMENTAL HEALTH, 17(2): 140-146, APR. 1975.
LG EN.
AB NONE.
ID CHLORDANE, AMMONIUM CHLORIDE, ZINC SULFATE, XYLENE, LEAD NITRATE, COPPER SULFATE, SILVER NITRATE, PYRIDINE, PHENOLS, NICKEL CHLORIDE.
DE FISH, CHEMICAL POLLUTANTS, BIOASSAYS, AMMONIA, INSECTICIDES, TOXICITY SALTS, METALS.
AN P 7600951.

<693>

AU KRISTOFFERSSON R. BROBERG S. OIKARI A.
YR 73.
TI PHYSIOLOGICAL EFFECTS OF A SUBLETHAL CONCENTRATION OF PHENOL IN THE PIKE ESOX-LUCIUS IN PURE BRACKISH WATER.
SO ANN ZOOL FENN. 10 (2). 392-397.
DE AMINO-ACID METABOLISM ACTIVITY.
AN B 58034724.

<694>

AU KRISTOFFERSSON R. BROBERG S. OIKARI A. PEKKARINEN M.
YR 74.
TI EFFECT OF A SUBLETHAL CONCENTRATION OF PHENOL ON SOME BLOOD PLASMA ENZYME ACTIVITIES IN THE PIKE ESOX-LUCIUS IN BRACKISH WATER.
SO ANN ZOOL FENN. 11 (3). 220-223.
DE GLUTAMATE PYRUVATE TRANS AMINASE LACTATE DEHYDROGENASE GLUTAMATE OXAL ACETATE TRANS AMINASE CHOLIN ESTERASE.
AN B 59028857.

<695>

AU KRIVENTSOVA T D.
YR 76.
TI THE EFFECT OF SEWAGE ON THE PHYSIOLOGICAL GROUPS OF BACTERIA IN THE DUBOSSARY RESERVOIR.
SO IZV AKAD NAUK MOLD SSR SER BIOL KHIM NAUK. 5. (RECD 1977) 46-50.
DE MOLDAVIAN-SSR USSR AMMONIFIERS NITRIFIERS DENITRIFIERS CELLULOSE DECOMPOSING SULFATE REDUCING AMYLOLYTIC PETROLEUM OXIDIZING METHANE OXIDIZING PHENOL OXIDIZING FAT DECOMPOSING.
AN B 78010900.

<696>

AU KRUPATKIN, I. L. ROZHENTSOVA, E. P.
IN KIROV. POLITEKH. INST. KIROV. USSR.
YR 75.
TI LIQUID EXTRACTION OF DIHYDRIC PHENOLS FROM AQUEOUS SOLUTIONS.
SO IZV. VYSSH. UCHEBN. ZAVED. KHIM. KHIM. TEKHNOL. 18. P1505. 1975.
LG RS.
DE RESORCINOL ISOPROPYL ETHER AQ. PYROCATECHOL ISOPROPYL ETHER AQ. PHENOL ISOPROPYL ETHER AQ. CRIT SOLN TEMP AQ PHENOL.
AN C 08404022727.

<697>
AU KRUPITSKAIA I D. PIKULEVA M M. RANOV A I.
YR 67.
TI EXPERIENCE IN STUDYING THE EFFICACY OF MEASURES FOR PREVENTING THE POLLUTION OF THE MIASS RIVER WITH PHENOLS.
TR OPYT IZUCHENIIA EFFEKTIVNOSTI MEROPRIIATII, PREDUPREZHDAIUSHCHIKH ZAGRAIAZENIE R. MIASS FENOLAMI.
SO GIG SANIT. 32. 5. P88-9. MAY 67.
LG RS.
MJ PHENOLS.
MN RUSSIAN-FEDERATION.
AN M 69184008.

<698>
AU KRYATOV, I. A. SKVORTSOV, A. F. GUSHCHINA, L. M.
IN USSR.
YR 74.
TI USE OF OXIDIZING AGENTS FOR EXTENSIVE PURIFICATION OF WATER CONTAINING PHENOL, SURFACTANTS, AND PETROLEUM.
SO TEKHNOL. OCHISTKI PIT'EV. VODY I SAN.-GIGIEN. TREBOVANIYA K EE KACHESTVU. P123-5. 1974.
LG RS.
DE PHENOL OXIDN WASTEWATER. SURFACTANT WASTERWATER OXIDN. PETROLEUM WASTEWATER OXIDN. WASTEWATER OXIDN POLLUTANT.
AN C 08310084637.

<699>
AU KUDRISH I K. MIAGKII B I. KHENKINA L M. EVSEEVA A E. KRYSHTAB T P.
YR 77.
TI EFFECT OF SUBSTANCES EXTRACTED FROM COAL ON THE OXIDATIVE AND GROWTH ACTIVITY OF METHANE-OXIDIZING BACTERIA.
TR VPLYV EKSTRAKTYVNYKH RECHOVYN VUHILLIA NA OKYSLIUVAL'NU I ROSTOVU AKTYVNIST' METANOKYSLIUIUCHYKH BAKTERII.
SO MIKROBIOL ZH. 39. 5. P591-6. SEP-OCT 77.
LG UK.
MJ BACTERIA: ME.
MN BACTERIA: GD. OXIDATION-REDUCTION.
AN M 78030820. 7802.

<700>
AU KUHN, A. T. WILSON, C.
IN UNIV. SALFORD. SALFORD. ENGL.
YR 77.
TI THE CATALYTIC AIR OXIDATION OF CYANIDES.
SO OBERFLAECHE-SURF. 18. P93-6. 1977.
LG GE.
DE CYANIDE REMOVAL CATALYTIC AIR OXIDN. WATER REMOVAL CYANIDE.
AN C 08706044733.

<701>
AU KULSHRESHTHA, H. K. MITRA, D. P. CHATTERJEE, A. K.
IN DETT. DEF. RES. LAB. GWALIOR. INDIA.
YR 72.
TI SIMPLE TEST FOR THE DETECTION OF TRACES OF PHENOL IN DRINKING WATER.
SO LABDEV, PART A. 10. P174-5. 1972.
LG EN.
DE PHENOL DETN WATER. WATER ANALYSIS PHENOL.
AN C 08008040860.

<702>
AU KUNTE H.
IN HYGIENE-INSTITUT DER UNIVERSITAT MAINZ.
YR 75.
TI THE DETERMINATION OF PHENOLS IN WATER: GAS CHROMATOGRAPHIC IDENTIFICATION BY MEANS OF THE ELECTRON AFFINITY (AUTHOR'S TRANSL).
TR UNTERSUCHUNGEN ZUR BESTIMMUNG VON PHENOLEN IM WASSER: GASCHROMATOGRAPHISCHE IDENTIFIZIERUNG AUF GRUND DES ELEKTRONENANLAGERUNGSVERMOGENS.
SO ZENTRALBL BAKTERIOL ORIG B. 160. 2. P148-54. MAR 75.
LG GE.
MJ PHENOLS: AN.
MN DINITROPHENOLS: AN. (GW).
AN M 76015468.

<703>
AU KUNTE H.
YR 71.
TI THIN-LAYER AND GAS- CHROMATOGRAPHIC DETERMINATION OF PHENOLS PRESENT IN WATER.
TR UNTERSUCHUNGEN ZUR BESTIMMUNG VON PHENOLEN IM WASSER MIT HILFE DER DUNNSCHICHT- UND GASCHROMATOGRAPHIE.
SO ZENTRALBL BAKTERIOL ORIG B. 155. 1. P41-9. SEP 71.
LG GE.
MJ PHENOLS: IP.
MN CHROMATOGRAPHY-GAS. ESTERS.
AN M 72098297.

<704>

AU KUNTE, HELGA. SLEMROVA, JANA.
IN HYG.-INST. UNIV. MAINZ. MAINZ. GER.
YR 75.
TI IDENTIFICATION OF PHENOLIC SUBSTANCES IN SURFACE WATER BY GAS CHROMATOGRAPHY AND MASS SPECTROMETRY.
SO Z. WASSER ABWASSER FORSCH. 8. P176-82. 1975.
LG GE.
DE PHENOLIC COMPD IDENTIFICATION RIVER. CHROMATOG PHENOLIC COMPD WATER. MASS SPECTROMETRY PHENOLIC COMPD WATER.
AN C 08516112577.

<705>

AU KUO, MING-FU.
IN MC GILL UNIVERSITY (CANADA) (0781) PH.D. 1968, 001PP.
YR 68.
TI DISPERSON OF POLLUTANTS IN WIDE AND SHALLOW RIVERS.
SO ADD C1977030.
DE ENGINEERING, GENERAL (0537).
AN D ADG03-00438.

<706>

AU KURDISH, I. K. MYAGKII, B. I. KHENKINA, L. M. EVSEEV, A. E. KRYSHTAB, T. P. MALASHENKO, YU. P.
IN INST. MIKROBIOL. VIRUSOL. KIEV. USSR.
YR 77.
TI EFFECT OF EXTRACTIVE SUBSTANCES OF COAL ON THE OXIDATIVE AND GROWTH ACTIVITY OF METHANE-OXIDIZING BACTERIA.
SO MIKROBIOL. ZH. (KIEV). 39. P591- 6. 1977.
LG UK.
DE MINERAL COAL EXT BACTERIA GROWTH. METHANE OXIDN BACTERIA COAL EXT.
AN C 08725197027.

<707>

AU KURIYAGAWA F. OKUZAWA A. MATSUMOTO S.
YR 73.
TI PRACTICAL ANALYSIS OF CYANIDE ION IN INDUSTRIAL WASTE WATER.
SO J HYG CHEM. 19 (2). 110-116.
DE COLORIMETRY.
AN B 58028365.

<708>

AU KUVANDYKOV, I. SH. NURMUKHAMETOVA, L. A.
IN USSR.
YR 75.
TI HIGH-SPEED ANALYSIS OF AQUEOUS SOLUTIONS OF TRIETHYLENE GLYCOL.
SO PROBL. NEFTI I GAZA TYUMENI. NAUCH.-TEKHN. SB. P45-8. 1975.
LG RS.
DE ETHYLENE GLYCOL DETN TITRIMETRY. GLYCOL TRIETHYLENE DETN TRITRIMETRY .
AN C 08526201775.

<709>

AU KUWAHARA, MASAAKI. TSUJI, MASAO.
IN DEP. FOOD SCI. KAGAWA UNIV. KAGAWA. JAPAN.
YR 76.
TI BACTERIAL PRODUCTION OF CATECHOL FROM BENZOIC ACID. I. ACCUMULATION OF CATECHOL FROM BENZOIC ACID BY A MUTANT INDUCED FROM CORYNEBACTERIUM GLUTAMICUM.
SO HAKKO KOGAKU ZASSHI. 54. P782-8. 1976.
LG JA.
DE CATECHOL CORYNEBACTERIUM BENZOATE.
AN C 08607041795.

<710>

AU KUZNETSOV, M. D. KUZNETSOV, E. R.
IN USSR.
YR 74.
TI ANALYSIS OF THE STEAM- CIRCULATION METHOD TO REMOVE PHENOL FROM WATER .
SO MET. KOKSOKHIM. 37. P100-6. 1974.
LG RS.
DE PHENOL REMOVAL WASTEWATER. STEAM PHENOL REMOVAL WASTEWATER.
AN C 08106029234.

<711>

AU KUZNETSOVA, E. M. RASHIDOVA, D. SH. ELISEEVA, N. M.
IN MOSK. GOS. UNIV. MOSCOW. USSR.
YR 77.
TI DESCRIPTION OF THE EXTRACTION OF DIHYDRIC PHENOLS FROM WATER BY DIFFERENT ORGANIC SOLVENTS.
SO UZB. KHIM. ZH. P93-100. 1977.
LG RS.
DE PHENOL EXTN WATER SOLVENT. PYROCATECHOL EXTN WATER SOLVENT. RESORCINOL EXTN WATER SOLVENT. ALC EXTN PHENOL WATER. ACETATE EXTN PHENOL WATER. ETHER EXTN PHENOL WATER.
AN C 08726205980.

<712>
AU KVASNIKOV E I. TIN'IANOVA N Z. KRIVITS'KII I P.
YR 70.
TI NAPHTHALENE OXIDIZING BACTERIA OF THE WESTERN UKRAINIAN OIL DEPOSITS2 .
TR NAFTALINOKYSLIUIUCHI BAKTERII ZAKHIDNOUKRAINS'KYKH NAFTORODOVYSHCH.
SO MIKROBIOL ZH. 32. 3. P294-7. MAY-JUN 70.
LG UK.
MJ BACTERIA: ME. SOIL-MICROBIOLOGY.
MN ACTINOMYCETALES: ME. MYCOBACTERIUM: ME. XANTHOMONAS: ME.
AN M 71204365.

<713>
AU KVASNIKOV E I. TIN'YANOVA N Z.
YR 74.
TI NAPHTHALENE ASSIMILATING BACTERIA OF THE PSEUDOMONAS GENUS FROM OIL BEARING SOILS AND THEIR PROPERTIES.
SO MIKROBIOLOGIYA. 43 (4). 710-714.
DE METABOLISM SOLE CARBON SOURCE.
AN B 60037158.

<714>
AU LABORDE A L. GIBSON D T.
IN DEP. MICROBIOL. UNIV. TEX. AUSTIN, TEX. 78712. USA.
YR 77.
TI METABOLISM OF DI BENZO THIOPHENE BY A BEIJERINCKIA-SP.
SO APPL ENVIRON MICROBIOL. 34 (6). (RECD 1978) 783-790.
LG EN.
DE PSEUDOMONAS-PUTIDA NAPHTHALENE DI HYDRO DIOL DEHYDROGENASE.
AN B 65041584.

<715>
AU LAHAM, S. FARANT, J -P.
IN CANADA DEPT. OF NATIONAL HEALTH & WELFARE. HEALTH PROTECTION BRANCH, ENVIRONMENTAL HEALTH DIRECTORATE, DIV OF ENVIRONMENTAL TOXICOLOGY, INHALATION TOXICOLOGY SECTION, OTTAWA, ONT. CAN.
YR 77.
TI QUANTITATIVE DETERMINATION OF BIPHENYL DERIVATIVES BY PHOTODENSITOMETRY.
SO CHEMOSPHERE: CHEMISTRY, PHYSICS, AND BIOLOGY AS FOCUSED ON ENVIRONMENTAL PROBLEMS, 6(2-3): 117- 128, 1977.
LG EN.
AB NONE.
ID RATS, PHOTODENSITOMETRY, URINE, 4,4-DINITROBIPHENYL.
DE METABOLITES, HUMANS, MAMMALS, AROMATIC COMPOUNDS, CHROMATOGRAPHY, LABORATORY METHODS.
AN P 7704946.

<716>
AU LAKHNOVA V A.
YR 75.
TI EFFECT OF ANILINE ON DAPHNIA- MAGNA.
SO TR SARAT OTD GOS NAUCHNO-ISSLED INST OZERN RECHN RYBN KHOZ. 13. 102- 104 (FROM REF ZH BIOL, 1976, 1U456).
DE ABSTRACT NERVOUS SYSTEM DISTURBANCE ALIMENTATION LETHAL CONCENTRATION MAXIMUM PERMISSIBLE CONCENTRATION.
AN B 76066198.

<717>
AU LAMBERTON, J G. CLAEYS, R R.
IN OREGON STATE UNIV. DEPT. OF AGRICULTURAL CHEMISTRY, CORVALLIS.
YR 70.
TI DEGRADATION OF 1-NAPHTHOL IN SEA WATER.
SO JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, 18(1): 92-96, JAN.-FEB. 1970.
LG EN.
AB NONE.
ID GYPSUM POND.
DE FERTILIZERS, PHOSPHATES, FOOD CROPS, FLUORIDES.
AN P 7004874.

<718>
AU LAMONTAGNE, R A. SWINNERTON, J W.
IN NRL, WASH. DC 20375.
YR 74.
TI OCEANIC DISTRIBUTION OF LOW-MOLECULAR WEIGHT HYDROCARBONS: BASELINE MEASUREMENTS.
SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, 8(7): 657-663, JULY 1974.
LG EN.
AB NONE.
ID BASE LINE CONCENTRATIONS, ETHANE, ETHYLENE, METHANE, PROPANE, PROPYLENE.
DE ALIPHATIC COMPOUNDS, DISTRIBUTION, MARINE ENVIRONMENTS, WATER POLLUTION MEASUREMENTS.
AN P 7501293.

<719>

AU LANGLEY, WILLIAM D.
IN TEXAS A AND M UNIV. COLLEGE STATION. TEX.
YR 69.
TI GAS CHROMATOGRAPHIC INVESTIGATION OF SECONDARY ALCOHOL AND KETONE UTILIZATION BY AEROBIC MICROORGANISMS.
PG 81 PP.
LG EN.
AV 69-14,149.
DE AEROBIC TRANSFORMATION KETONES. KETONES AEROBIC TRANSFORMATION. ALCS AEROBIC TRANSFORMATION. GAS CHROMATOG AEROBIC PROCESSES. CHROMATOG AEROBIC PROCESSES.
AN C 07222114749.

<720>

AU LANK, JOHN C. JR. WALLACE, ALFRED T.
IN B. F. GOODRICH CHEM. CO. CLEVELAND. OHIO.
YR 70.
TI EFFECT OF ACRYLONITRILE ON ANAEROBIC DIGESTION OF DOMESTIC SLUDGE.
SO ENG. BULL. PURDUE UNIV. ENG. EXT. SER. 137. P518-27. 1970.
LG EN.
DE ACRYLONITRILE ANAEROBIC DIGESTION. WASTE WATER ACRYLONITRILE DECOMPN BIOL. DOMESTIC SLUDGE ACRYLONITRILE DECOMPN. ACTIVATED SLUDGE ACRYLONITRILE DECOMPN.
AN C 07622131165.

<721>

AU LAPTEVA, N. A.
IN USSR.
YR 73.
TI ROLE OF SOME PHYSIOLOGICAL GROUPS OF BACTERIA IN PHENOL OXIDATION IN EXPERIMENTAL WATER BODIES.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P172-7. 1973.
LG RS.
DE PHENOL OXIDN BACTERIA WASTEWATER.
AN C 08016087251.

<722>

AU LAPTEVA, N. A.
IN USSR.
YR 73.
TI MICROFLORA OF EXPERIMENTAL POOLS POLLUTED WITH PHENOL.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P152-8. 1973.
LG RS.
DE PHENOL POLLUTION FRESHWATER MICROFLORA. BIODEGRDN PHENOL FRESHWATER.
AN C 08014074023.

<723>

AU LAPTEVA, N. A.
YR 73. 12P.
TI CHANGES IN BACTERIAL PERIPHYTON DURING PHENOL DEGRADATION IN MODEL BODIES OF WATER.
AV TRANSLATED BY MARTHA GERRARD FROM TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR.
PR PC$3.50/MF$2.25.
AB THE REMOVAL OF PHENOLS FROM SURFACE WATERS BY DEGRADATION, BY BACTERIA AND AQUATIC PLANTS WAS INVESTIGATED IN TANKS TO WHICH PHENOL WAS INTRODUCED AT DAILY CONCENTRATIONS RANGING FROM 1 MG TO 500 MG/LITER. RESULTS SHOWED THAT THE PRESENCE OF PHENOL STIMULATED THE MULTIPLICATION OF MANY SPECIES OF BACTERIA AND THE GROWTH OF PLANKTON, SINCE MANY OF THE MICROFLORA ADAPTED TO THE UPTAKE AND METABOLSIM OF PHENOL.
MJ PHENOLS, BIODEGRADATION, SURFACE-WATERS, PURIFICATION, BACTERIA, METABOLISM, PLANKTON, METABOLISM.
MN AQUATIC-ECOSYSTEMS, BIOADSORBENTS, WATER-POLLUTION.
ID ERDA-520200, ERDA-560302, NTISERDA.
AN N ORNL-TR-2929.

<724>

AU LAPTEVA, N. A. MIKRYAKOVA, T. F. BARONKINA, L. A. ZHUKOV, B. F. GORYACHEVA, N. V.
YR 73. 10P.
TI PHENOL DEGRADATION IN ARTIFICIAL BODIES OF WATER (1970 EXPERIMENTS).
AV TRANSLATION.
PR PC$3.50/MF$2.25.
AB PHENOL AS INTRODUCED DAILY INTO WATER WHICH CONTAINED THE AQUATIC PLANTS ELODEA, LEMNA, AND SPIROGYRA. AT WEEKLY INTERVALS DETERMINATIONS WERE MADE ON NITRATE NITROGEN, PHOSPHATE PHOSPHORUS, AND AMMONIA. THE WATER WAS ALSO ANALYZED FOR BACTERIA, FLAGELLATES, AND INFUSORIA. RESULTS ARE SHOWN BY MEANS OF GRAPHS.
MJ PHENOL, BIODEGRADATION, PLANTS, ABUNDANCE, BACTERIA, ABUNDANCE.
MN AMMONIA, AQUATIC-ORGANISMS, DECOMPOSITION, NITRATES, NITROGEN,

PHOSPHATES, PHOSPHORUS, PROTOZOA.
ID ERDA-520200, TRANSLATIONS, WATER-POLLUTION, USSR, NTISERDA.
AN N ORNL-TR-2930.

<725>
AU LAQUA, ERIKA. RUNGE, FRANZ. THIELEMANN, HORST.
IN SAECHS. AKAD. WISS. LEIPZIG. E. GER.
YR 73.
TI ADSORPTIVE ELIMINATION AND IDENTIFICATION OF ORGANIC MATTER IN WATER USING DIFFERENT FILTERING MEDIA.
SO ACTA HYDROCHIM. HYDROBIOL. 1. P345-51. 1973.
LG GE.
DE ACTIVATED CARBON ADSORPTION WATER TREATMENT. ADSORPTION ORG WATER TREATMENT. FILTER MEDIA ORG WATER TREATMENT. POLYMERIC ADSORBENT WATER TREATMENT. PHENOL IDENTIFICATION WATER. CHROMATOG PHENOL WATER .
AN C 08218115946.

<726>
AU LARSON R A. WESTON J C.
YR 76.
TI ANALYSIS OF WATER EXTRACTS OF CRUDE PETROLEUM BY GEL PERMEATION CHROMATOGRAPHY.
SO BULL ENVIRON CONTAM TOXICOL. 16 (1). 44-52.
DE AQUATIC ORGANISMS TOXICITY AROMATIC HYDRO CARBONS ALIPHATIC HYDRO CARBONS PHENOLIC SUBSTANCES UV SPECTRA FLUORESCENCE EMISSION GAS CHROMATOGRAPHY.
AN B 77077748.

<727>
AU LASTOCHKINA K O.
YR 73.
TI SPECTROPHOTOMETRIC DETERMINATION OF CYCLO HEXANONE IN BODIES OF WATER.
SO GIG SANIT. 38 (1). 68-70.
DE POLLUTION.
AN B 57057693.

<728>
AU LE PETIT J. BERTRAND J C. N'GUYEN M H. TAGGER S.
IN LABORATOIRE DE MICROBIOLOGIE, UNIVERSITE AIX-MARSEILLE III CENTRE DE SAINT-JER-OME 13013 MARSEILLE (FRANCE).
YR 75.
TI ON THE TAXONOMY AND PHYSIOLOGY OF BACTERIA UTILIZING HYDROCARBONS IN THE SEA (AUTHOR'S TRANSL).
TR ETUDE TAXONOMIQUE ET PHYSIOLOGIQUE DE BACTERIES SE DEVELOPPANT SUR HYDROCARBURES EN MILIEU MARIN.
SO ANN MICROBIOL (PARIS). 126. 3. P367-80. APR 75.
LG FR.
MJ ALKANES: ME. SEAWATER.
MN ACETATES: ME. IP, ME. CL. GRAM-NEGATIVE-AEROBIC-BACTERIA: IP, ME, CL. PSEUDOMONAS: ME.
AN M 76060019.

<729>
AU LE PETIT J. TAGGER S.
IN LABORATOIRE DE MICROBIOLOGIE, FACULTE DES SCIENCES ET TECHNIQUES DE SAINT-JER-OME, MARSEILLE, FRANCE.
YR 76.
TI DEGRADATION OF HYDROCARBONS IN THE PRESENCE OF OTHER ORGANIC SUBSTANCES BY BACTERIA ISOLATED FROM SEAWATER.
TR DEGRADATION DES HYDROCARBURES EN PRESENCE D'AUTRES SUBSTANCES ORGANIQUES PAR DES BACTERIES ISOLEES DE L'EAU DE MER.
SO CAN J MICROBIOL. 22. 11. P1654- 7. NOV 76.
LG FR.
MJ ACINETOBACTER: ME. WATER-MICROBIOLOGY.
MN ACETATES: ME. ENGLISH-ABSTRACT.
AN M 77023477. 7702.

<730>
AU LE POIDEVIN, G. J.
IN ELECTR. COUNC. RES. CENT. CAPENHURST/CHESTER. ENGL.
YR 77.
TI THE OXIDATION OF POLYETHYLENE IN AQUEOUS SOLUTION. PART 1. DETECTION AND CHARACTERIZATION OF OXYGENATED GROUPS BY INFRARED SPECTROSCOPY.
PG 27 PP.
LG EN.
DE POLYETHYLENE OXIDN MECHANISM. SODIUM CHLORIDE POLYETHYLENE OXIDN. ANTIOXIDANT POLYETHYLENE OXIDN.
AN C 08718136690.

<731>
AU LE RAL P. BUATOIS J. PENY J. FONTANGES R.
YR 73.
TI ADAPTATION OF AN ACTIVATED SLUDGE TO THE PURIFICATION OF AN INDUSTRIAL

EFFLUENT.
SO TRIB CEBEDEAU (CENT BELG ETUD DOC EAUX AIR). 26 (351). 78-89.
DE ARTHROBACTER PSEUDOMONADACEAE MICRO FLORA PHENOL DI METHYL SULFOXIDE DEGRADATION.
AN B 74044379.

<732>

AU LEBEDINSKII, N. A.
IN INST. GIDROBIOL. KIEV. USSR.
YR 70.
TI EFFECT OF SMALL CONCENTRATIONS OF PHENOL ON A CHANGE IN THE LEVEL OF TRACE ELEMENTS IN CARP.
SO VOP. VOD. TOKSIKOL. P181-3. 1970.
LG RS.
AV TOPACHEVSKII, A. V.
DE CYPRINUS PHENOL TRACE ELEMENT. CARP PHENOL TRACE ELEMENT. FISH METAL TISSUE PHENOL.
AN C 07421108744.

<733>

AU LECLERC, E. DEVLAMINCK, F.
YR 50. 11P.
TI TOXICOLOGICAL STUDY OF SOME SUBSTANCES GENERALLY PRESENT IN COKING PLANT EFFLUENTS.
AV TRANSLATION.
PR PC$3.50/MF$2.25.
AB THE RULE OF STRONG ACIDS IS VERIFIED FOR SULFURIC ACIDS. THE HEMOGLOBIN POISONS, AND PRINCIPALLY POTASSIUM CYANIDE, ARE THE MOST TOXIC OF THE POISONS EXAMINED. BENZENE, NAPHTHALENE, CRESOL, AND PHENOL, WITH POTASSIUM CYANIDE, ARE THE CHIEF CHEMICAL SUBSTANCES ON WHICH PURIFICATION SHOULD BE ATTEMPTED. INDIRECTLY TOXIC SUBSTANCES, WHOSE MECHANICAL ACTION (LESIONS, CLOSING OF THE GILL COVERS) IS SOMETIMES DANGEROUS, ARE PRACTICALLY ABSENT IN THE WATERS STUDIED. ONLY THOSE WHICH COME FROM COKE QUENCHING CONTAINING VERY HARD PARTICLES DETACHED FROM THE MASS.
NEVERTHELESS, THEY MOSTLY FLOAT AND ARE THUS NOT TOO MUCH OF A PROBLEM.
MJ COKING, ENVIRONMENTAL-EFFECTS, SULFURIC-ACID, TOXICITY, CYANIDES, TOXICITY, BENZENE, TOXICITY.
MN AMMONIA, CRESOLS, FISHES, HEMOGLOBIN, NAPHTHALENE, PHENOLS, POLLUTION, QUENCHING, SODIUM-CHLORIDES, TOXINS, WATER, WATER-POLLUTION.
ID ERDA-520200, TRANSLATIONS, NTISERDA.
AN N ORNL-TR-2973.

<734>

AU LEDUC, G. DIXON, D G.
IN CONCORDIA UNIV. DEPT. OF BIOLOGICAL SCIENCES, MONTREAL, QUE. CAN.
YR 77.
TI EXPOSURE OF RAINBOW TROUT TO SUBLETHAL LEVELS OF CYANIDE: EFFECTS ON GROWTH AND LIVER TISSUE.
SO 12TH CANADIAN SYMPOSIUM ON WATER POLLUTION RESEARCH: ABSTRACTS OF PAPERS. IN WATER AND POLLUTION CONTROL, 115(4): 63, APR. 1977.
LG EN.
AB NONE.
ID ABSTRACT ONLY, RAINBOW TROUT, LIVER.
DE FISH, TOXICANTS, GROWTH, TISSUES, DIGESTIVE PATHOLOGY, CYANIDES, ORGANS.
AN P 7704377.

<735>

AU LEDUC, G. DIXON, D. G. RUBER, H. RUBY, S. M. SPEYER, M. WEBB, M.
IN DEP. BIOL. SCI. CONCORDIA UNIV. ST. PAUL. MINN.
YR 76.
TI TOXICITY STUDIES OF CHEMICALS ASSOCIATED WITH NORTHERN MINING OPERATIONS.
PG 21 PP.
LG EN.
DE XANTHATE WATER POLLUTION FISH. TROUT CYANIDE WATER POLLUTION. ARSENIC TROUT WATER POLLUTION.
AN C 08703016691.

<736>

AU LEDUC, GERARD.
IN OREGON STATE UNIVERSITY (0172) PH.D. 1966 158PP.
YR 66.
TI SOME PHYSIOLOGICAL AND BIOCHEMICAL RESPONSES OF FISH TO CHRONIC POISONING BY CYANIDE.
SO DAI V27(08), SEC B, P2560.
DE AGRICULTURE, FORESTRY AND WILDLIFE (0478).
AN D ADG67-00723.

<737>

AU LEDUC, GERARD. CHAN, KENNETH K. S.
IN DEP. BIOL. SCI. CONCORDIA UNIV. MONTREAL. QUE.
YR 75.
TI THE EFFECTS OF CHRONIC CYANIDE

POISONING ON THE TOLERANCE OF RAINBOW TROUT TO VARYING SALINITY.
SO WATER POLLUT. RES. CAN. 10. P118-25. 1975.
LG EN.
DE CHLORIDE BLOOD FISH CYANIDE. TROUT SALINITY TOLERANCE CYANIDE. OSMOREGULATION FISH CYANIDE TOXICITY.
AN C 08607038298.

<738>

AU LEE D R. BUIKEMA A L JR. CAIRNS J JR.
YR 75.
TI THE TOXICITY OF A SIMULATED REFINERY EFFLUENT TO SOME FRESH WATER ANIMALS.
SO ASB (ASSOC SOUTHEAST BIOL) BULL. 22 (2). 63.
DE ABSTRACT DAPHNIA-PULEX DAPHNIA-MAGNA NITOCRIS-SP AEDES-AEGYPTI DERO-SP SALMO-GAIRDNERI STYLARIA-SP HYALELLA-AZTECA TUBIFEX-SP GONIOBASIS-SP CAMBARUS-SP PHILODINA-ACUTICORNIS DUGESIA-TIGRINA PHYSA-SP AEOLOSOMA-HEADLEYI HELIOSOMA-SP LEPOMIS-MACROCHIRUS CARASSIUS-AURATUS KAOLINITE PHENOL AMMONIUM CHLORIDE FUEL OIL POTASSIUM CHROMATE SODIUM MONO SULFIDE LETHALITY.
AN B 76072695.

<739>

AU LEE R F. RYAN C. NEUHAUSER.
YR 76.
TI FATE OF PETROLEUM HYDRO CARBONS TAKEN UP FROM FOOD AND WATER BY THE BLUE CRAB CALLINECTES-SAPIDUS.
SO MAR BIOL (BERL). 37 (4). 363-370.
DE BENZO PYRENE FLUORENE NAPHTHALENE METHYL NAPHTHALENE METHYL CHOLANTHRENE HEXA DECANE HEPTA DECANE DOTRIACONTANE RADIO LABEL METABOLISM HEPATO PANCREAS BLOOD.
AN B 63026689.

<740>

AU LEE R F. SAUERHEBER R. DOBBS G H.
YR 72.
TI UPTAKE METABOLISM AND DISCHARGE OF POLY CYCLIC AROMATIC HYDRO CARBONS BY MARINE FISH.
SO MAR BIOL (BERL). 17 (3). (RECD 1973) 201-208.
DE GILLICHTHYS-MIRABILIS OLIGOCOTTUS-MACULOSUS CITHARICHTHYS-STIGMAEUS CARBON-14 NAPHTHALENE TRITIATED 3 4 BENZO PYRENE CARCINOGENS GILL UPTAKE LIVER METABOLISM URINARY EXCRETION.
AN B 56044121.

<741>

AU LEE, RICHAD F. ANDERSON, JACK W.
IN SKIDAWAY INST. OCEANOGR. SAVANNAH, GA.
YR 77.
TI FATE AND EFFECT OF NAPHTHALENES. CONTROLLED ECOSYSTEM POLLUTION EXPERIMENT.
SO BULL. MAR. SCI. 27. P127-34. 1977.
LG EN.
DE NAPHTHALENE WATER POLLUTION PLANKTON. PETROLEUM NAPHTHALENE WATER POLLUTION.
AN C 08623166022.

<742>

AU LEE, RICHARD F.
IN SKIDAWAY INST. OF OCEANOGRAPHY, SAVANNAH, GA. FOUNDATION, WASHINGTON, D.C. OFFICE FOR THE INTERNATIONAL DECADE OF OCEAN EXPLORATION. 407 934.
YR 77. 8P.
TI FATE OF PETROLEUM COMPONENTS IN ESTUARINE WATERS OF THE SOUTHEASTERN UNITED STATES.
AV PUB. IN PROCEEDINGS OF 1977 OIL SPILL CONFERENCE (PREVENTION, BEHAVIOR, CONTROL, CLEANUP) HELD AT NEW ORLEANS, LOUISIANA ON MARCH 8-10, 1977, P611-618 1977.
PR NOT AVAILABLE NTIS.
AB RADIOLABELED HYDROCARBONS AND PHENOLS WERE ADDED TO WATER SAMPLES FROM THE SKIDAWAY AND COOPER RIVERS, TWO ESTUARINE RIVERS ON THE U. S. SOUTH ATLANTIC COAST. THE ADSORPTION OF HYDROCARBONS TO PARTICLES AND MICROBIAL DEGRADATION OF DIFFERENT PETROLEUM COMPONENTS WERE THE PROCESSES STUDIED. ALKANES, LOW MOLECULAR WEIGHT AROMATICS AND PHENOLS WERE RAPIDLY DEGRADED TO 14CO2. LOW DEGRADATION RATES WERE OBSERVED FOR THE HIGHER WEIGHT POLYCYCLIC AROMATIC HYDROCARBONS, FLUORENE, ANTHRACENE, BENZ(A)ANTHRACENE, AND BENZ(A)PYRENE, AND FROM 12 TO 70% OF THESE HYDROCARBONS WERE ABSORBED TO SUSPENDED PARTICLES IN THE WATER. RADIOAUTOGRAPHS OF PARTICLES AFTER THE ADDITION OF (3)H-BENZ(A)PYRENE AND (3)H-HEXADECANE TO THE WATER

SAMPLES INDICATED THE HYDROCARBONS ASSOCIATED WITH DETRITAL PARTICLES. THIS DETRITUS WAS COMPOSED OF A MIXTURE OF CLAY, ORGANIC MATTER, PLANKTON REMAINS AND LIVING MICROBES. ONE AREA OF THE COOPER RIVER HAD VISIBLE OIL SLICKS AND THE DEGRADATION RATES OF ADDED HEPTADACANE, NAPHTHALENE AND METHYLNAPHTHALENE WERE 0.4, 2.8 AND 1.1 MICRO G/L/DAY, RESPECTIVELY. IN CONTRAST, AT A DOWNSTREAM SITE, WHERE THERE WERE NO VISIBLE SLICKS, THE DEGRADATION RATE OF THESE SAME HYDROCARBONS WERE 0.1, 0.7 AND 0.1 MICRO G/L/DAY, RESPECTIVELY.

MJ AROMATIC-HYDROCARBONS, PHENOLS.

MN ADSORPTION, PETROLEUM-PRODUCTS, WATER-POLLUTION, OIL-POLLUTION, PARTICLES, RADIOACTIVE-ISOTOPES, LIMNOLOGY, CONCENTRATION-COMPOSITION, ISOTOPIC-LABELING, ESTUARIES, LABELED-SUBSTANCES, SKIDAWAY-RIVER, COPPER-RIVER, SEDIMENTS, WATER-ANALYSIS, CHEMICAL-ANALYSIS.

ID WATER-POLLUTION-DETECTION, OIL-POLLUTION-DETECTION, SOUTH-ATLANTIC-REGION-UNITED-STATES, BIODETERIORATION, INTERNATIONAL-DECADE-OF-OCEAN-EXPLORATION, OIL-TAGGING, OIL-SPILLS, REPRINTS, NTISIDOE, NTISNSFG.

AN N PB-267 708/6SL.

<743>

AU LEE, RICHARD F.

IN SKIDAWAY INST. OF OCEANOGRAPHY, SAVANNAH, GA. FOUNDATION, WASHINGTON, D.C. OFFICE FOR THE INTERNATIONAL DECADE OF OCEAN EXPLORATION. NATIONAL RESEARCH COUNCIL OF CANADA, OTTAWA, (ONTARIO). 407 934.

YR 75. 6P.

TI FATE OF PETROLEUM HYDROCARBONS IN MARINE ZOOPLANKTON.

NT SPONSORED IN PART BY NATIONAL RESEARCH COUNCIL OF CANADA, OTTAWA (ONTARIO), AND BY GRANTS NSF-GX-42482 AND NSF-GB-24834.

AV PUB. IN CONFERENCE ON PREVENTION AND CONTROL OF OIL POLLUTION EFFECTS, P549-553.

PR NOT AVAILABLE NTIS.

AB THE WORK DESCRIBED IN THE PAPER IS CONCERNED WITH THE UPTAKE, METABOLISM, STORAGE, AND DISCHARGE OF PETROLEUM HYDROCARBONS BY MARINE ZOOPLANKTON, AN IMPORTANT LINK IN THE MARINE FOOD WEB. BOTH PARAFFINIC AND POLYCYCLIC AROMATIC HYDROCARBONS WERE ADDED TO SEAWATER CONTAINING VARIOUS SPECIES OF ZOOPLANKTON COLLECTED OFF CALIFORNIA, BRITISH COLUMBIA, AND IN THE ARCTIC. UPTAKE WAS LINEAR FOR 24 HOURS WITH NO FURTHER INCREASE IN STORED HYDROCARBON AFTER THAT TIME. MOST INGESTED HYDROCARBON WAS METABOLIZED AND DISCHARGED BY THE VARIOUS CRUSTACEAN SPECIES ALTHOUGH A SMALL PERCENTAGE (LESS THAN 1% OF THE INGESTED HYDROCARBON) WAS STORED BY ALL SPECIES EVEN AFTER A LONG DEPURATION TIME. PRELIMINARY WORK HAS SUGGESTED THAT HYDROCARBONS ARE METABOLIZED AND DISCHARGED AT A GREATER RATE WHEN ABSORBED TO INGESTED ALGAE. NO METABOLISM OF HYDROCARBONS BY THE ALGAE CELLS WAS NOTED. ALSO, ALKYLATED AROMATIC HYDROCARBONS APPEAR TO BE METABOLIZED AT A HIGHER RATE THAN THE NONALKYLATED AROMATIC HYDROCARBONS.

MJ ZOOPLANKTON, HYDROCARBONS.

MN WATER-POLLUTION, OILS, PLANKTON, AQUATIC-ANIMALS, MARINE-BIOLOGY, METABOLISM, PETROLEUM-PRODUCTS, CRUSTACEA, PARAFFIN-BASE-CRUDES, POLYCYCLIC-COMPOUNDS, AROMATIC-COMPOUNDS, ADSORPTION, STEROIDS, NAPHTHALENE, ALGAE.

ID OIL-POLLUTION, WATER-POLLUTION-EFFECTS-ANIMALS, METABOLITES, BENZOPYRENES, METHYLCHOLANTHRENES, NTISIDOE, NTISDODN, NTISNSF.

AN N PB-245 699/4SL.

<744>

AU LEE, RICHARD F. RYAN, CHARLOTTE.

IN SKIDAWAY INST. OF OCEANOGRAPHY, SAVANNAH, GA. FOUNDATION, WASHINGTON, D.C. OFFICE FOR THE INTERNATIONAL DECADE OF OCEAN EXPLORATION. 407 934.

YR 76. 8P.

TI BIODEGRADATION OF PETROLEUM HYDROCARBONS BY MARINE MICROBES.

AV PUB. IN PROCEEDINGS OF THE INTERNATIONAL BIODEGRADATION SYMPOSIUM (3RD), P119-125 1976.

PR NOT AVAILABLE NTIS.

AB DIFFERENT PARAFFINIC AND AROMATIC 14C-LABELLED HYDROCARBONS WERE ADDED TO ESTUARINE AND OFFSHORE WATER SAMPLES FOLLOWED BY THE MEASUREMENT OF 14CO2 PRODUCED AFTER INCUBATION PERIODS OF 6-96 HR. BENZENE,

TOLUENE, NAPHTHALENE, METHYLNAPHTHALENE, HEPTADECANE, HEXADECANE, AND OCTADECANE HAD HIGH DEGRADATION RATES RELATIVE TO FLUORENE AND BENZPYRENE. THESE RATES WERE AFFECTED BY SEASON, TIDE, CONCENTRATION OF HYDROCARBON, AND INCUBATION TIME. BENZENE AND TOLUENE, BUT NOT THE OTHER HYDROCARBONS TESTED, OBEYED THE KINETIC MODEL OF DEGRADATION, I.E. A LINEAR INCREASE IN TURNOVER TIME WITH AN INCREASE IN HYDROCARBON CONCENTRATION. THE RESULTS SUPPORT THE CONCLUSION THAT MICROBES ARE IMPORTANT IN DEGRADING MANY PETROLEUM HYDROCARBONS IN OCEAN WATERS. HOWEVER, BASED ON THE LOW DEGRADATION RATES OF FLUORENE AND BENZPYRENE, IT IS HYPOTHESIZED THAT MICROBIAL BREAKDOWN OF HIGH MOLECULAR WEIGHT AROMATICS IS NOT AN IMPORTANT PROCESS IN OCEAN WATER.
MJ OIL-POLLUTION-CONTROL, BIODETERIORATION, MARINE-MICROORGANISMS.
MN CRUDE-OIL, PETROLEUM-PRODUCTS, ISOTOPIC-LABELING, OCEAN-CURRENTS, OCEAN-TIDES, HYDROCARBONS, ESTUARIES, SEA-WATER, CARBON-14, BENZENE, TOLUENE, NAPHTHALENE, NAPTHALENE-COMPOUNDS, FLUORENES.
ID WATER-POLLUTION-SAMPLING, HEXADECANES, INTERNATIONAL-DECADE-OF-OCEAN-EXPLORATION, NTISIDOE, NTISNSFG.
AN N PB-261 794/2SL.

<745>

AU LEMBIK, ZH. L.
IN USSR.
YR 72.
TI ACCUMULATION OF BENZO(A)PYRENE BY DAPHNINS SPECIES.
SO VOP. PROFIL. ZAGRYAZNENIYA VNESH. SREDY, CHASTNOSTI VODOEMOV, KANTSEROGEN. VESHCHESTV. P88-90. 1972.
LG RS.
DE BENZOPYRENE ACCUMULATION DAPHNIA. POLLUTION WATER BENZOPYRENE.
AN C 07902009555.

<746>

AU LEPRI L. DESIDERI P G. LANDINI M. TANTURLI G.
IN INSTITUTE OF ANALYTICAL CHEMISTRY, UNIVERSITY OF FLORENCE, FLORENCE (ITALY).
YR 75.
TI CHROMATOGRAPHIC BEHAVIOUR OF PHENOLS ON THIN LAYERS OF CATION AND ANION EXCHANGERS. II. DOWEX 50- X4 AND REXYN 102.
SO J CHROMATOGR. 109. 2. P365-76. 18 JUN 75.
LG EN.
MJ CHROMATOGRAPHY-ION-EXCHANGE: MT. PHENOLS: AN.
MN ACETATES. CHEMISTRY-PHYSICAL. HYDROGEN-ION-CONCENTRATION.
AN M 75211621.

<747>

AU LEPRI L. DESIDERI P G. MUZZARELLI R A.
IN INSTITUTE OF ANALYTICAL CHEMISTRY, UNIVERSITY OF FLORENCE, FLORENCE, ITALY.
YR 77.
TI CHROMATOGRAPHIC BEHAVIOUR OF NUCLEIC ACID CONSTITUENTS AND OF PHENOLS ON CHITOSAN THIN LAYERS.
SO J CHROMATOGR. 139. 2. P337-42. 21 SEP 77.
LG EN.
MJ CHITIN: AA. PURINES: AN.
MN CHEMISTRY.
AN M 77249944. 7712.

<748>

AU LEVAGGI, D. A. FELDSTEIN, M.
IN BAY AREA AIR POLLUT. CONTROL DIST. SAN FRANCISCO, CALIF.
YR 72.
TI DETERMINATION OF PHENOLS AND TRIMETHYLAMINE IN INDUSTRIAL EFFLUENTS.
SO JOINT CONF. SENSING ENVIRON. POLLUTANTS, COLLECT. TECH. PAP. 1. P71-1115, 2 PP. 1972.
LG EN.
DE PHENOL DETN INDUSTRIAL EFFLUENT. TRIMETHYLAMINE DETN INDUSTRIAL EFFLUENT. GAS CHROMATOG INDUSTRIAL EFFLUENT.
AN C 07704024324.

<749>

AU LEVICHEV, S A. PLEKHOTKIN, V F.
IN LENINGRAD A.A. ZHDANAV STATE UNIV. (ORDER OF LENIN), UNIVERSITETSKAYA NAB. 7/9 LENINGRAD B-164, USSR.
YR 73.
TI REMOVAL OF DIMETHYLAMINE FROM WATER BY FROTH SEPARATION.
SO JOURNAL OF APPLIED CHEMISTRY OF THE

U.S.S.R. 46(1): 225-227, JULY 1, 1973.
LG EN.
AB NONE.
ID DIMETHYLAMINE, MULTISTAGE FROTH SEPARATION.
DE WATER PURIFICATION, POLLUTANT REMOVAL, ADSORPTION.
AN P 7401424.

<750>

AU LEWIS, W. M.
IN SEVERN-TRENT WATER AUTH. ENGL.
YR 75.
TI POLYNUCLEAR AROMATIC HYDROCARBONS IN WATER.
SO WATER TREAT. EXAM. 24, PT. 4. P243-77. 1975.
LG EN.
DE POLYNUCLEAR AROM HYDROCARBON POLLUTION. FLUORANTHENE WATER POLLUTION . BENZOPYRENE WATER POLLUTION. INDENOPYRENE WATER POLLUTION. BENZOFLUORANTHENE WATER POLLUTION. BENZOPERYLENE WATER POLLUTION.
AN C 08512083025.

<751>

AU LIAW G S. WOODBRIDGE D D.
IN UNIVERSITY CENTER FOR POLLUTION RESEARCH, ENVIRONMENTAL ENGINNEERING DEPARTMENT, FLORIDA INSTITUTE OF TECHNOLOGY, MELBOURNE, FLA.
YR 77.
TI EFFECTS OF GAMMA RADIATION ON AQUEOUS SOLUTIONS OF CYANIDE.
SO BULL ENVIRON CONTAM TOXICOL. 17. 6. P714-9. JUN 77.
LG EN.
MJ CYANIDES: RE.
MN COBALT-RADIOISOTOPES. TIME- FACTORS.
AN M 77222693. 7711.

<752>

AU LILLARD, DORRIS A. POWERS, JOHN J.
IN GEORGIA UNIV. ATHENS. DEPT. OF FOOD SCIENCE. RESEARCH CENTER, CORVALLIS, OREG.
YR 75. 27P.
TI AQUEOUS ODOR THRESHOLDS OF ORGANIC POLLUTANTS IN INDUSTRIAL EFFLUENTS.
NT FINAL REPT.
PR PC$3.75/MF$2.25.
AB THE INVESTIGATION WAS DESIGNED TO DETERMINE THE ODOR THRESHOLDS IN WATER OF ORGANIC POLLUTANTS THAT HAVE BEEN IDENTIFIED IN INDUSTRIAL EFFLUENTS. SEVEN TO FOURTEEN JUDGES WERE USED TO DETERMINE THE ODOR THRESHOLD VALUES OF 13 COMPOUNDS AT ROOM TEMPERATURE AND 60C. ODOR THRESHOLD VALUES FOR THE COMPOUNDS IN PPM AT ROOM TEMPERATURE ARE ACENAPHTHENE, 0.08; 2-ETHYL-1-HEXANOL, 1.28; BUTANOL, 2.77; GEOSMIN, 0.00013; 2-METHYL NAPHTHALENE, 0.01; 1-METHYL NAPHTHALENE, 0.02; DIACETONE ALCOHOL, 44.1; DIBENZOFURAN, 0.12; 2- BENZOTHIAZOLE, 0.08; 2-MERCAPTOBENZOTHIAZOLE, 1.76; 2-ETHYL- 4-METHYL-1,3-DIOXOLANE, 0.38; CAPROLACTAM, 59.7; D-CAMPHOR, 1.29. EXTREME VALUE CALCULATIONS WERE MADE TO PREDICT A CONCENTRATION BELOW WHICH A CERTAIN PERCENTAGE OF THE POPULATION MIGHT STILL BE ABLE TO DETECT THE COMPOUND(S).
MJ ODORS, INDUSTRIAL-WASTES, SMELL, WATER-POLLUTION.
MN THRESHOLDS-PERCEPTION, TEMPERATURE, EFFLUENTS, ORGANIC- COMPOUNDS, WATER-ANALYSIS, STATISTICAL-ANALYSIS, RESPONSES, EVALUATION, TABLES-DATA, HUMANS.
ID NTISEPAORD.
AN N PB-242 734/2SL.

<753>

AU LILLE, J. BITTER, L. A. KUNDEL, H. MURD, A. PEINAR, U.
IN INST. SLANTSEV. KOHTLA-JARVE. USSR.
YR 69.
TI SEPARATION OF ALKYLRESORCINOLS FROM WATER-SOLUBLE, SHALE PHENOLS.
SO EESTI NSV TEAD. AKAD. TOIM. KEEM. GEOL. 18. P359-64. 1969.
LG RS.
DE METHYL RESORCINOLS. RESORCINOLS METHYL. SHALE OILS RESORCINOLS. PHENOLS SHALE RESORCINOLS.
AN C 07212057386.

<754>

AU LIND D T. SMITH L. L. JR. BRODERIUS S J.
YR 77.
TI CHRONIC EFFECTS OF HYDROGEN CYANIDE ON THE FATHEAD MINNOW.
SO J WATER POLLUT CONTROL FED. 49. 2. P262-8. FEB 77.
LG EN.
MJ FISHES: PH.
MN ANIMAL. TIME-FACTORS. (NON-NIH-SUP).
AN M 77168475. 7708.

<755>

AU LINDEN AC VAN DER. THIJSSE G J.
YR 65.
TI THE MECHANISMS OF MICROBIAL OXIDATIONS OF PETROLEUM HYDROCARBONS.
SO ADV ENZYMOL. 27. P469-546. 1965.
LG EN.
MJ BACTERIA: ME.
MN ALKANES: ME. CATECHOLS: ME. MYCOBACTERIUM: ME. PHENANTHRENES: ME.
AN M 69087458.

<756>

AU LITERATHY P.
YR 75.
TI STUDY OF RIVER POLLUTION CAUSED BY MICRO POLLUTANTS.
SO WATER RES. 9 (11). 1001-1003.
DE DANUBE HUNGARY PHENOLS PETROLEUM HEAVY METALS FATS SUSPENDED SOLIDS.
AN B 61034234.

<757>

IN LITTLE (ARTHUR D.), INC. CAMBRIDGE, MASS. 208 850.
YR 70. 399P.
TI WATER QUALITY CRITERIA DATA BOOK. VOLUME I. ORGANIC CHEMICAL POLLUTION OF FRESHWATER.
NT WATER POLLUTION CONTROL RESEARCH SERIES. SEE ALSO VOLUME 2, PB-208 988.
AV 18010 DPV 12/70.
PR PC-GPO/MF$0.95.
AB THE REPORT DISCUSSES AND LISTS RESULTS FROM A LITERATURE SEARCH ON ORGANIC WATER POLLUTANTS WHICH HAVE BEEN FOUND IN U.S. WATERS. AFTER A BRIEF DISCUSSION ON INTERPRETING THE RESULTS, TABLES ARE PRESENTED LISTING SPECIFIC CHEMICALS AND NOT ONLY THEIR CONCENTRATION BUT ALSO THE FOLLOWING: TOXICITY; TISSUE CONCENTRATION; CARCINOGENICITY; MUTAGENICITY AND TERATOGENICITY; SOURCES; AND THRESHOLD DOSES.
MJ TOXICOLOGY, WATER-POLLUTION, WATER-POLLUTION, ORGANIC-COMPOUNDS.
MN TABLES-DATA, REVIEWS, CONCENTRATION-COMPOSITION, CARCINOGENS, SOURCES, INDUSTRIAL-WASTES, HALOHYDROCARBONS, HYDROCARBONS, MUTAGENS, SULFUR-ORGANIC-COMPOUNDS, INSECTICIDES, HERBICIDES, CHLORINE-ORGANIC-COMPOUNDS, CARBOXYLIC-ACIDS, SULFONATES, ORGANIC-PHOSPHATES, AROMATIC-POLYCYCLIC-HYDROCARBONS, METAL-CONTAINING-ORGANIC-COMPOUNDS, PHENOLS, LEATHAL-DOSAGE.
ID WATER-POLLUTION-EFFECTS-ANIMALS, WATER-POLLUTION-EFFECTS-PLANTS.
AN N PB-208 987.

<758>

AU LIU, C. C.
IN PITTSBURGH UNIV. PA. CHEMICAL AND PETROLEUM ENGINEERING DEPT.
YR 76. 42P.
TI THE DEVELOPMENT OF SENSORS AND TECHNIQUES FOR IN SITU WATER QUALITY MONITORING.
NT ANNUAL REPORT, 13 JUN. 1975 - 12 JUN. 1976.
PR PC$4.00/MF$3.00.
AB ENZYME ELECTRODES AND CHLORIDE ION ELECTRODES WERE INVESTIGATED FOR IN SITU MONITORING OF WATER QUALITY. PRELIMINARY RESULTS SHOW THAT MINIATURE CHLORIDE ION ELECTRODES AND A PHENOL SENSOR ARE MOST PROMISING IN DETERMINING TRACE CONTAMINANTS IN WATER.
MJ ION-SELECTIVE-ELECTRODES, POLLUTION-MONITORING, TRACE-CONTAMINANTS, WATER-QUALITY.
MN CHEMICAL-ANALYSIS, ELECTROCHEMISTRY, PHENOLS.
ID WATER-POLLUTION-DETECTION, NTISNASA.
AN N N76-26717/8SL.

<759>

AU LIU, S -Y. BOLLAG, J -M.
IN PENNSYLVANIA STATE UNIV. DEPT. OF AGRONOMY, LAB. OF SO MICROBIOLOGY, UNIVERSITY PARK.
YR 72.
TI FUNGAL DEGRADATION OF 1-NAPHTHOL.
SO CANADIAN JOURNAL OF MICROBIOLOGY. OTTAWA, 18(7): 1113- 1117, JULY 1972.
LG EN.
AB NONE.
ID *FUSARIUM SOLANI., 1-NAPHTHOL.
DE PESTICIDE DECOMPOSITION, INSECTICIDES, FUNGI, CARBARYL, MICROBIAL ACTIVITY, BIODEGRADATION, SOILS.
AN P 7300045.

<760>

AU LIZINA, N. N. CHEMOVA, N. G. CHASTOV, A. I.
IN USSR.
YR 75.

TI STUDY OF THE TOXIC EFFECT OF FORMALIN ON FISH.
SO TR. SARAT. OTD. GOSNIORKH. 13. P18-22. 1975.
LG RS.
DE FORMALIN TOXICITY CARP.
AN C 08713096925.

<761>
AU LLOYD, R. SWIFT, D J.
IN GREAT BRITAIN MINISTRY OF AGRICULTURE, FISHERIES AND FOO SALMON AND FRESHWATER FISHERIES LAB. 10 WHITEHALL PL. LONDON SW1A 2HH, ENG.
YR 76.
TI SOME PHYSIOLOGICAL RESPONSES BY FRESHWATER FISH TO LOW DISSOLVED OXYGEN, HIGH CARBON DIOXIDE, AMMONIA AND PHENOL WITH PARTICULAR REFERENCE TO WATER BALANCE.
SO EFFECTS OF POLLUTANTS ON AQUATIC ORGANISMS. EDITED BY A. P. M. LOCKWOOD. SOCIETY FOR EXPERIMENTAL BIOLOGY SEMINAR SERIES, 2. LONDON: CAMBRIDGE UNIVERSITY PRESS, 1976. PP. 47-69.
LG EN.
AB NONE.
ID PHENOL, HYPOXIA, URINE FLOW RATE, TROUT.
DE DO, FISH, ALCOHOLS, HEMATOLOGY, PHYSIOLOGY, AMMONIA, CARBON DIOXIDE.
AN P 7703290.

<762>
AU LONSANE B K. BARUA P K. SINGH H D. MATHUR R K. BARUAH J N. IYENGAR M S.
YR 74.
TI FORMATION OF SALICYLIC ACID FROM NAPHTHALENE BY MICROORGANISMS: PART I. STUDIES ON ISOLATION, CHARACTERIZATION & GROWTH OF BACTERIAL ISOLATES UTILIZING NAPHTHALENE.
SO INDIAN J EXP BIOL. 12. 2. P158- 61. MAR 74.
LG EN.
MJ BACTERIA: ME. (SALICYLIC-ACID).
MN BACTERIA: IP, GD.
AN M 75059461.

<763>
AU LORBACHER H. PUELS H-D. SCHLIPKOETER H-W.
YR 71.
TI STUDIES ON THE STORAGE AND METABOLISM OF 3 4 BENZ PYRENE BENZO A PYRENE IN MICROORGANISMS.
SO ZENTRALBL BAKTERIOL PARASITENKD INFEKTIONSKR HYG ERSTE ABT ORIG REIHE B HYG PRAEV MED. 155 (2). (RECD 1972) 168-174.
DE ESCHERICHIA-COLI PSEUDOMONAS-AERUGINOSA PROTEIN.
AN B 56004350.

<764>
AU LORBACHER H. SCHLIPKOETER H-W.
YR 71.
TI STUDIES ON THE MICROBIAL DEGRADATION OF OIL.
SO ARCH HYG BAKTERIOL. 154 (6). 577-580.
DE PSEUDOMONAS-AERUGINOSA YEAST EXTRACT PROTEIN SYNTHESIS N HEPTA DECANE MINERAL SALTS MEDIUM.
AN B 53019352.

<765>
AU LU P Y. METCALF R L.
IN DEPARTMENTS OF ENTOMOLOGY AND ZOOLOGY, UNIVERSITY OF ILLINOIS, URBANA-CHAMPAIGN, ILLINOIS 61801.
YR 75.
TI ENVIRONMENTAL FATE AND BIODEGRADABILITY OF BENZENE DERIVATIVES AS STUDIED IN A MODEL AQUATIC ECOSYSTEM.
SO ENVIRON HEALTH PERSPECT. 10. P269-84. APR 75.
LG EN.
MJ BENZENE-DERIVATIVES. WATER-POLLUTANTS-CHEMICAL.
MN ALGAE-GREEN: ME. BIODEGRADATION. INSECTICIDES. SOLUBILITY. (NON-NIH-SUP).
AN M 76002930.

<766>
AU LU P Y. METCALF R L. PLUMMER N. MANDEL D.
IN DEPARTMENT OF ENTOMOLOGY AND INSTITUTE FOR ENVIRONMENTAL STUDIES URBANA, ILLINOIS.
YR 77.
TI THE ENVIRONMENTAL FATE OF THREE CARCINOGENS: BENZO-(ALPHA)-PYRENE, BENZIDINE, AND VINYL CHLORIDE EVALUATED IN LABORATORY MODEL ECOSYSTEMS.
SO ARCH ENVIRON CONTAM TOXICOL. 6. 2-3. P129-42. 1977.
LG EN.
MJ BENZIDINES. (VINYL-CPDS).

MN ALGAE-GREEN: ME. DAPHNIA: ME. MOSQUITOES: ME. SOIL: AN. (NON-NIH-SUP). VINYL-CPDS.
AN M 77265613. 7712.

<767>

AU LU, P -Y. METCALF, R L.
IN UNIV. OF ILLINOIS, DEPT. OF ENTOMOLOGY, IL 61801.
YR 75.
TI ENVIRONMENTAL FATE AND BIODEGRADABILITY OF BENZENE DERIVATIVES AS STUDIED IN A MODEL AQUATIC ECOSYSTEM.
SO ENVIRONMENTAL HEALTH PERSPECTIVES, 10: 269-284, APR. 1975.
LG EN.
AB NONE.
ID BENZENE DERIVATIVES, ENVIRONMENTAL FATE.
DE BIODEGRADATION, ECOSYSTEMS, ENVIRONMENTAL IMPACT, FOOD CHAINS, ORGANIC WASTES, SIMULATION, WASTE DISPOSAL, WATER POLLUTION.
AN P 7503548.

<768>

AU LUBINSKI K S. SPARKS R E.
YR 75.
TI THE USE OF TOXICITY INDICES TO ASSESS THE QUALITY OF THE ILLINOIS RIVER.
SO ASB (ASSOC SOUTHEAST BIOL) BULL. 22 (2). 64.
DE ABSTRACT USA BLUEGILL FISH AMMONIA COPPER CYANIDE DETERGENTS FLUORIDE ZINC COMBINED LETHALITY.
AN B 76072701.

<769>

AU LUBINSKI K S. SPARKS R E. JAHN L A.
YR 74.
TI THE DEVELOPMENT OF TOXICITY INDICES FOR ASSESSING THE QUALITY OF THE ILLINOIS RIVER.
SO UNIV ILL URBANA-CHAMPAIGN WATER RESOUR CEN RES REP. (96). (RECD 1975) 1-46.
DE USA BLUEGILL FISH ALDRIN AMMONIA COPPER CYANIDE FLUORIDE LINEAR ALKYLATE SULFONATE LEAD MERCURY PHENOLS ZINC CHROMIUM ARSENIC CADMIUM.
AN B 60046381.

<770>

AU LUDZACK, F. J. MOORE, W. A. RUCHHOFT, C. C.
IN ENVIRONMENTAL HEALTH CENTER, CINCINNATI, OHIO.
YR 53. 18P.
TI ANALYSIS OF CYANIDE IN WATER AND WASTE SAMPLES.
PR PC$3.00/MF$0.95.
AB THE PRESENCE OF CYANIDE IN WATER HAS A SIGNIFICANT EFFECT UPON THE BIOLOGICAL ACTIVITY OF THE SYSTEM. MOST CYANIDE COMPOUNDS ARE HIGHLY REACTIVE. THE ANALYTICAL PROCEDURES USED FOR THEIR ESTIMATION ARE NOT SPECIFIC; THEREFORE THE MAJOR PROBLEM IS THAT OF ISOLATION FROM INTERFERENCES. ALTHOUGH MANY PROCEDURES FOR THE ANALYSIS OF CYANIDE HAVE BEEN PUBLISHED, RELATIVELY FEW OF THESE ARE SATISFACTORY FOR GENERAL USE IN WATER AND INDUSTRIAL WASTE ANALYSIS. THE PROCEDURES DESCRIBED WERE SELECTED BECAUSE THEY ARE APPLICABLE FOR MANY TYPES OF SAMPLES. THE METHODS WERE FOUND EFFECTIVE ON RELATIVELY PURE WATER, RIVER WATER, SEWAGE AND SEVERAL INDUSTRIAL WASTES, INCLUDING THOSE FROM GAS AND COKE OPERATION, PETROLEUM REFINING, AND PLATING.
MJ CYANIDES, WATER-ANALYSIS.
ID WATER-POLLUTION-DETECTION, EPAL.
AN N PB-215 553.

<771>

AU LUDZACK, F. J. SCHAFFER, R. B.
IN ROBERT A. TAFT SANITARY ENGINEERING CENTER, CINCINNATI, OHIO. 306 950.
YR 60. 32P.
TI ACTIVATED SLUDGE TREATMENT OF CYANIDE, CYANATE AND THIOCYANATE.
NT PRESENTED AT THE INDUSTRIAL WASTE CONFERENCE (15TH), LAFAYETTE, IND. 2-5 MAY 60.
PR PC$3.75/MF$0.95.
AB CYANIDE, CYANATE, AND THIOCYANATE, SEPARATELY OR IN COMBINATION WITH OTHER WASTES, FREQUENTLY ARE WASTE WATER PROBLEMS. SEVERAL TREATMENT METHODS ARE AVAILABLE FOR CYANIDE; SOME LACK THE DESIRED EFFICIENCY, OTHERS ARE DIFFICULT TO CONTROL, AND ALL HAVE HIGH OPERATING COSTS. LITTLE INFORMATION IS AVAILABLE ON THE BIOLOGICAL DEGRADATION OF CYANATES. THIOCYANATE POLLUTION HAS A LONG HISTORY BUT ITS CHARACTERISTICS COMMONLY ARE

MISUNDERSTOOD OR IGNORED; LOWER TREATMENT EFFICIENCY FOLLOWS. SINCE THE THREE ANIONS ARE RELATED IN CHEMISTRY, IN INDUSTRY, AND IN WASTE CONTROL, A GROUP COMPARISON SHOULD BRING OUT CERTAIN ASPECTS OF THE INDIVIDUALS THAT MIGHT OTHERWISE BE UNNOTICED. THE REPORT DISCUSSES THE AUTHORS' RESEARCH IN THIS AREA.
MJ ACTIVATED-SLUDGE-PROCESS, CYANIDES, SEWAGE-TREATMENT, CYANIDES, CYANATES, SEWAGE- TREATMENT, THIOCYANATE, SEWAGE- TREATMENT, CHEMICAL-REMOVAL-SEWAGE- TREATMENT, CYANATES.
ID EPAL.
AN N PB-216 384.

<772>

AU LUKYANENKO, V I. FLEROV, B A.
YR 71.
TI COMPARATIVE INVESTIGATION OF THE RESISTANCE TO PHENOL OF TWO DIFFERENT AGE GROUPS OF SALMO IRIDENS GIBB.
SO NEWFOUNDLAND. MEMORIAL UNIVERSITY, ST. JOHNS. LIBRARY BULLETIN, 5(2): 14-15, MARCH 1971.
LG EN.
AB NONE.
ID *SALMO IRIDENS, EXTENDED SUMMARY ONLY.
DE PHENOL, FISHES, TOXICITY.
AN P 7006934.

<773>

AU LUKYANENKO, V I. PETUKHOVA, L A.
YR 71.
TI CHANGES IN ACTIVITY OF CHOLINESTERASE IN THE MUSCLES AND AMOUNT OF AMMONIAC IN BRAIN OF PHENOL POISONED CARASSIUS CARASSIUS.
SO NEWFOUNDLAND. MEMORIAL UNIVERSITY, ST. JOHNS. LIBRARY BULLETIN, 5(2): 17, MARCH 1971.
LG EN.
AB NONE.
ID *CARASSIUS CARASSIUS, SUMMARY ONLY.
DE PHENOL, FISHES, TOXICITY.
AN P 7006934.

<774>

AU LUKYANENKO, V. I.
IN BUREAU OF COMMERCIAL FISHERIES, WASHINGTON, D.C. OFFICE OF FOREIGN FISHERIES (TRANSLATIONS).
YR 72. 10P.
TI ON THE MECHANISM OF ACTION OF PHENOL ON THE CENTRAL NERVOUS SYSTEM OF FISH IN CONNECTION WITH CHANGE OF THE EXTERNAL SYMPTOM COMPLEX OF PHENOL INTOXICATION UNDER THE INFLUENCE OF ANTICHOLINESTERASE PREPARATIONS (O MEKHANI ZME DEISTVIYA FENOLA NA TSENTRALNUYU SISTEMU RYB V SVYAZI S IZMENENIEM VNESHNOGO SIMPTOMOKOMPLEKSA FENOLNOI INTOKSIKATSII POD VLIYANIEM ANTIKHOLINESTERAZNYKH PREPARATOV).
NT TRANS. OF MONO. VOPROSY VODNOI TOKSIKOLOGII, MOSCOW, 1970 P154-162, BY ROBERT M. HOWLAND.
PR PC$3.00/MF$0.95.
AB ACETYLCHOLINE ALSO HAS SIGNIFICANT IMPORTANCE AS A MEDIATOR IN THE CENTRAL NERVOUS SYSTEM OF FISH, WHICH WAS SHOWN AS FAR BACK AS THE EXPERIMENTS OF BYKOV (1935, 1937). IT IS QUITE WELL- FOUNDED TO HYPOTHESIZE THAT AT THE BASE OF GENERAL INTOXICATION OF THE NERVE TYPE, WHICH INCLUDES PHENOL POISONING, LIES DISTURBANCE OF THE ACETYLCHOLINE METABOLISM OF THE BRAIN, AND IN PARTICULAR DISTURBANCE OR CHANGE IN THE COURSE OF ITS ENZYMATIC HYDROLYSIS. THIS INVESTIGATION WAS UNDERTAKEN FOR THE PURPOSE OF ESTABLISHING THE CHARACTER OF INFLUENCE OF ANTICHOLINESTERASE PREPARATIONS ON THE EXTERNAL SYMPTOM COMPLEX OF PHENOL INTOXICATION, WHICH IN TURN WOULD PERMIT THE FORMING OF AN OPINION ABOUT THE ROLE OF THE COMPLEX OF ACETYLCHOLINESTERASES IN THE REACTIONS OF FISH TO PHENOL IRRITATION.
MJ FISHES, PHENOL, PHENOL, TOXICITY, CHOLINESTERASE- INHIBITORS, PHENOL.
MN CENTRAL-NERVOUS-SYSTEM, ACETYLCHOLINE, ACETYLCHOLINESTERASE, METABOLISM, MOTOR-REACTIONS, USSR, TRANSLATIONS.
ID PHENOL-INTOXICATION.
AN N PB-208 200-T.

<775>

AU LUNT D. EVANS W C.
YR 70.
TI THE MICROBIAL METABOLISM OF BIPHENYL.
SO BIOCHEM J. 118. 3. P54P-55P. JUL 70.
LG EN.
MJ BACTERIA: ME.
MN PHENYLPYRUVIC-ACIDS: BI.
AN M 71011010.

<776>

AU LUPANOVA, L. K. SHKODICH, P. E. LEMBIK, ZH. L.
IN USSR.
YR 72.
TI BENZO(A)PYRENE CONTENT IN WASTE WATERS FROM PHENOL AND ACETONE PRODUCTION STUDIED BY THE CUMENE METHOD.
SO VOP. PROFIL. ZAGRYAZNENIYA VNESH. SREDY. CHASTNOSTI VODOEMOV. KANTSEROGEN. VESHCHESTV. P28-9. 1972.
LG RS.
DE BENZOPYRENE WATER POLLUTION.
AN C 07902009479.

<777>

AU LUR'E, YU. YU. BELEVTSEV, A. N. OVCHINNIKOVA, I. V.
IN USSR.
YR 74.
TI OXIDATION OF CRESOLS, QUINONES, AND POLYHYDRIC PHENOLS WITH CHLORINE DIOXIDE IN AQUEOUS SOLUTIONS.
SO TR. VNII VODOSNABZH. KANALIZ. GIDROTEKHN. SOORUZH. I INZH. GIDROGEOL. P1-4. 1974.
LG RS.
DE CRESOL OXIDN CHLORINE DIOXIDE. PHENOL POLYHYDRIC OXIDN CHLORINE DIOXIDE. QUINONE OXIDN CHLORINE DIOXIDE. CHLORINE DIOXIDE OXIDN CRESOL. OXIDN CRESOL CHLORINE DIOXIDE.
AN C 08313113855.

<778>

AU LUR'E, YU. YU. BELEVTSEV, A. N. OVCHINNIKOVA, I. V.
IN VSES. NAUCHNO-ISSLED. INST. VODOSNABZH. KANALIZ. GIDROTEKH. SOORUZH. INZH. GIDROGEOL. MOSCOW. USSR.
YR 73.
TI OXIDATION OF PHENOL BY CHLORINE DIOXIDE IN NATURAL AND WASTE WATERS.
SO VODOSNABZH. SANIT. TEKH. P7-11. 1973.
LG RS.
DE PHENOL OXIDN CHLORINE DIOXIDE. WASTE WATER PHENOL OXIDN.
AN C 07904023266.

<779>

AU LYKOVA, L. K.
IN USSR.
YR 75.
TI EFFECT OF THE CONCENTRATION OF PHENOL (CARBOLIC ACID) ON THE RATE OF ITS DECOMPOSITION IN SEA WATER.
SO TR. GOS. OKEANOGR. INST. 127. P55-7. 1975.
LG RS.
DE PHENOL BIODEGRDN SALT LAKEWATER. CASPIAN SEA PHENOL BIODEGRDN. POLLUTION PHENOL SEAWATER BIODEGRDN. DEGRDN BIO PHENOL SEAWATER.
AN C 08514098909.

<780>

AU LYNCH, R S. MIYAZAKI, S. SIKKA, H C.
IN SYRACUSE UNIV. RESEARCH CORP. LIFE SCIENCES DIV. SYRACUSE, NY 13210.
YR 75.
TI DEGRADATION OF CARBARYL AND 1-NAPHTHOL BY MARINE MICROORGANISMS.
SO BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, 13(6): 666-672, JUNE 1975.
LG EN.
AB NONE.
ID YEASTS, 1-NAPHTHOL.
DE BACTERIA, BIODEGRADATION, CARBAMATE COMPOUNDS, CARBARYL, FUNGI, MARINE ORGANISMS, METABOLITES, MICROORGANISMS.
AN P 7505867.

<781>

AU LYSYI, I. NELSON, K. H. NEWTON, P. R.
IN ROCKETDYNE, CANOGA PARK, CALIF. 308 000.
YR 67. 42P.
TI METHODS FOR THE DETERMINATION OF TRACE ORGANIC MATERIALS IN WATER.
NT RESEARCH AND DEVELOPMENT PROGRESS REPT. 1 JUN 65-24 NOV 66.
PR PC$3.00/MF$0.95.
AB THE DESCRIBED RESEARCH COVERS THE DEVELOPMENT OF ANALYTICAL METHODOLOGY FOR THE DETERMINATION OF ORGANICS IN WATER AS IT RELATES TO THE PROBLEM OF WATER DESALINATION. THE PRINCIPAL OBJECTIVE OF THE RESEARCH EFFORT WAS THE DEVELOPMENT OF INSTRUMENTAL MEANS FOR THE RAPID DETERMINATION OF THE TOTAL ORGANIC CONTENT IN WATER MATRICES. GAS CHROMATOGRAPHIC SEPARATION AND HYDROGEN FLAME IONIZATION DETECTION HAVE BEEN COMBINED WITH PYROLYSIS FOR THE RAPID DIRECT MEASUREMENT OF THE TOTAL ORGANIC CONTENT OF WATER AT THE PARTS PER MILLION

CONCENTRATION LEVEL. A MODIFICATION OF THE PROCEDURE, WHICH PROVIDES HIGHER SENSITIVITY AND MORE UNIFORM RESPONSE FOR A GREATER NUMBER OF ORGANIC COMPOUNDS, EMPLOYS STEAM AS A CARRIER GAS, AND A GLASS BEAD COLUMN. (AUTHOR).

MJ GAS-CHROMATOGRAPHY, WATER- ANALYSIS, CARBOHYDRATES, WATER- ANALYSIS.

MN PYROLYSIS, TRACE-ELEMENTS, METHANE, CELLULOSE, STARCHES, HEXOSES, FRESH-WATER, ORGANIC- COMPOUNDS.

ID PYROLYSIS-GAS-CHROMATOGRAPHY.

AN N PB-207 012.

<782>

AU MACIEJOWSKI, FRANCISZEK. SOKOLOWSKA, JADWIGA.

IN OSRODEK BADAW.-ROZWOJOWY KAUCZUKOW TWORZYW WINYLOWYCH. OSWIECIM. POL.

YR 76.

TI CHROMATOGRAPHIC DETERMINATION OF PHENOLS AND CHLORINATED BENZENE DERIVATIVES IN WASTE WATERS FROM PRODUCTION OF SYNTHETIC PHENOL.

SO GAZ. WODA TECH. SANIT. 50. P70- 2. 1976.

LG PO.

DE PHENOL WASTEWATER GAS CHROMATOG. CHLORINATED BENZENE WASTEWATER CHROMATOG.

AN C 08512082823.

<783>

AU MAGEE P N.

YR 73.

TI METABOLIC ASPECTS OF CHEMICAL CARCINOGENESIS.

SO DOLL, R. AND I. VODOPIJA (ED.). IARC (INTERNATIONAL AGENCY FOR RESEARCH ON CANCER) SCIENTIFIC PUBLICATION, NO. 7. HOST ENVIRONMENT INTERACTIONS IN THE ETIOLOGY OF CANCER IN MAN. PROCEEDINGS OF A MEETING. PRIMOSTEN, YUGOSLAVIA, AUG. 27 - SEPT. 2, 1972. XIX+464P. ILLUS. INTERNATIONAL AGENCY FOR RESEARCH ON CANCER: LYON, FRANCE. (DIST BY WORLD HEALTH ORGANIZATION, GENEVA, SWITZERLAND.). (RECD 1974) 213-221.

DE HUMAN PLANT PRODUCTS MOLD PRODUCTS BACTERIAL PRODUCTS 7 12 DI METHYL BENZ A ANTHRACENE 2 NAPHTHYLAMINE DI METHYLAMINO AZO BENZENE BETA PROPIO LACTONE NITROSOMETHYL UREA CARBON TETRA CHLORIDE ETHIONINE ETHYL CARBAMATE 4 NITRO QUINOLINE N OXIDE CARCINOGENS ENZYME ACTIVATION.

AN B 75013075.

<784>

AU MAGNARADZE, G. F. DOLIDZE, TS. G.

IN USSR.

YR 71.

TI USE OF SPECTROPHOTOMETRY FOR DETERMINATION OF PHENOL IN WATERS.

SO TR. GRUZ. NAUCH.-ISSLED. INST. PISHCH, PROM. NO. 5. P250-1. 1971.

LG RS.

DE PHENOL DETN WATER. WATER ANALYSIS PHENOL.

AN C 07822140161.

<785>

AU MAJESKI, EDWARD JOSEPH.

IN UNIVERSITY OF RHODE ISLAND (0186) PH.D. 1966, 089PP.

YR 66.

TI CONTROLLED POTENTIAL ELECTROLYSIS OF ANTHRACENE.

SO DAI V29(08), SEC B, P2782.

DE CHEMISTRY, ANALYTICAL (0486).

AN D ADG69-01033.

<786>

AU MAKALETS, B. I. IVANOVA, L. G. KURZANOVA, V. V.

IN NOVOKUIBYSHEV. FIL. NAUCHNO- ISSLED. INST. SINT. SPIRT. ORG. PROD. NOVOKUIBYSHEV. USSR.

YR 71.

TI CATALYTIC OXIDATION OF PHENOL IN AQUEOUS SOLUTIONS BY ATMOSPHERIC OXYGEN.

SO NEFTEKHIMIYA. 11. P723-8. 1971.

LG RS.

DE PHENOL OXIDN ATM OXYGEN.

AN C 07605024425.

<787>

AU MAKALETS, B. I. IVANOVA, L. G. KURZANOVA, V. V.

IN NOVOKUIBYSHEV, FIL. NAUCHNO- ISSLED. INST. SINT. SPIRT. ORG. PROD. NOVOKUIBYSHEV. USSR.

YR 71.

TI KINETICS OF THE ACCUMULATION OF HYDROQUINONE AND PYROCATECHOL DURING THE CATALYTIC OXIDATION OF PHENOL BY ATMOSPHERIC OXYGEN IN AQUEOUS SOLUTIONS.

SO NEFTEKHIMIYA. 11. P729-33. 1971.

LG RS.

DE HYDROQUINONES PYROCATECHOLS VIA OXIDN. PHENOL OXIDN ATM OXYGEN.

AN C 07605024424.

<788>

AU MAKALETS, B. I. IVANOVA, L. G. PANKRATOVA, K. G. KIRICHENKO, G. S.
IN NOVOKUIBYSHEVSK. FILIAL NIISS. NOVOKUIBYSHEVSK. USSR.
YR 70.
TI PREPARATION OF DIHYDRIC PHENOLS BY THE CATALYTIC OXIDATION OF PHENOL IN AQUEOUS SOLUTIONS.
SO NEFTEPERERAB. NEFTEKHIM. (MOSCOW). P23-5. 1970.
LG RS.
DE PYROCATECHOL PRODN PHENOL. HYDROQUINONE PRODN PHENOL. PHENOL CATALYTIC OXIDN. OXIDN CATALYTIC PHENOL.
AN C 07301003592.

<789>

AU MAKEEVA E N. MAKEEV A M. RODZILLER I D.
YR 75.
TI METABOLISM OF MONO CARBON COMPOUNDS DURING BIOLOGICAL PURIFICATION OF SEWAGE WATERS.
SO PRIKL BIOKHIM MIKROBIOL. 11 (3). 367-373.
DE OPERCULARIA-COARCTATA STYLONYCHIA-PUSTULATA NOTOMMATA-ANSATA METHANOL FORMALDEHYDE FORMIC-ACID.
AN B 61069317.

<790>

AU MAKEIKINA, V. V. MAMONTOVA, O. V. NEMCHENKO, A. G.
IN USSR.
YR 70.
TI VAPOR-PHASE CATALYTIC OXIDATION OF ORGANIC MATTER IN WASTE WATER FROM THE PRODUCTION OF BUTYL AND HIGHER ALCOHOLS.
SO KHIM. TEKHNOL. TOPL. MASEL. 15. P34-6. 1970.
LG RS.
DE CATALYTIC OXIDN ALCS PRODN WASTES. OXIDN CATALYTIC ALCS PRODN WASTES . BUTANOL PRODN WASTES OXIDN. ALCS PRODN WASTES OXIDN.
AN C 07312059107.

<791>

AU MAKULA R A. LOCKWOOD P J. FINNERTY W R.
IN DEPARTMENTS OF BIOCHEMISTRY AND MICROBIOLOGY, UNIVERSITY OF GEORGIA, ATHENS, GEORGIA 30602.
YR 75.
TI COMPARATIVE ANALYSIS OF THE LIPIDS OF ACINETOBACTER SPECIES GROWN ON HEXADECANE.
SO J BACTERIOL. 121. 1. P250-8. JAN 75.
LG EN.
MJ ALCALIGENES: AN.
MN ACINETOBACTER: ME, GD. CHROMATOGRAPHY-THIN-LAYER. DIGLYCERIDES: AN. FATTY-ALCOHOLS: AN. SPECTROPHOTOMETRY-INFRARED. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP). AN.
AN M 75114649.

<792>

AU MALLEVIALLE, J.
IN LABORATOIRE DE LA SOCIETE LYONNAISE DES EAUX ET DE L'ECLAIRAGE.
YR 75.
TI ACTION DE L'OZONE DANS LA DEGRADATION DES COMPOSES PHENOLIQUES SIMPLES ET POLYMERISES: APPLICATION AUX MATIERES HUMIQUES CONTENUES DANS LES EAUX.
SO TECHNIQUES ET SCIENCES MUNICIPALES ET REVUE L'EAU, 70(3): 107-113, MAR. 1975.
LG FR.
AB NONE.
ID BLEACHING, PHENOLS.
DE CHEMICAL DEGRADATION, EFFLUENT TREATMENT, OZONATION, OZONE, WATER TREATMENT.
AN P 7503538.

<793>

AU MALOSEJA Z. PAVLETIC Z. MUNJKO I.
YR 72.
TI BIOLOGICAL DECOMPOSITION OF PHENOL BY MIXED AND PURE CULTURES OF ALGAE.
SO ACTA BOT CROAT. 31 129-138.
DE CHLORELLA-VULGARIS PEDIASTRUM-DUPLEX COSMARIUM-LAEVE SCENEDESMUS-QUADRICAUDA CHROOCOCCUS-TURGIDUS NOSTOC-ENTOPHYTUM ANABAENA-AUGSTUMALIS GROWTH.
AN B 55022243.

<794>

AU MAMEDOVA, V. M. ABASHIN, V. G. LINETSKII, V. A.
IN VSES. NAUCHNO-ISSLED. INST. OLEFINOV. BAKU. USSR.
YR 73.
TI DETERMINATION OF ACETOPHENONE IN WASTE WATERS FROM THE COMBINED PRODUCTION OF PROPYLENE OXIDE AND

STYRENE.
SO AZERB. KHIM. ZH. P121-3. 1973.
LG RS.
DE ACETOPHENONE DETN WASTEWATER STYRENE. STYRENE WASTEWATER ANALYSIS ACETOPHENONE.
AN C 08102006027.

<795>
AU MANESCU, S. PETRE, I.
IN DISCIPLINA IG. GEN. COMUNALA. INST. MED.-FARM. BUCHAREST. ROM.
YR 72.
TI EPIDEMIOLOGIC ASPECTS OF ACCIDENTAL WATER POLLUTION WITH CHEMICAL SUBSTANCES.
SO IGIENA. 21. P387-92. 1972.
LG RO.
DE POLLUTION PESTICIDE PHENOL WATER.
AN C 07902009583.

<796>
AU MANTOVANI, E. MAZZEI, M. ROBERTIELLO, A. ZANOBI, A.
IN LAB. PROCESSI MICROBIOL. SNAM PROGETTI S.P.A. ROME. ITALY.
YR 77.
TI PHOTOSENSITIZED DEGRADATION OF POLYOLEFINS. II.
SO J. APPL. POLYM. SCI. 21. P589- 95. 1977.
LG EN.
DE PHOTOSENSITIZER DEGRDN POLYETHYLENE. AROM DIENE DEGRDN PHOTOSENSITIZER.
AN C 08620140655.

<797>
AU MARCONI, SIMONA. IONESCU, MARIOARA.
IN RES. DES. INST. WATER RESOUR. ENG. BUCHAREST. ROM.
YR 74.
TI TOXIC ACTION OF ACRYLONITRILE ON FISH.
SO STUD. PROT. CALITATII APELOR. 16. P7-22. 1974.
LG RO.
DE ACRYLONITRILE TOXICITY FISH.
AN C 08411069956.

<798>
AU MARINESCU A G. GODEANU M. MARINESCU D. IONILA D. NEGULESCU A.
YR 76.
TI EFFECT OF ORGANIC POLLUTANTS PHENOLS ON SURVIVAL AND RESPIRATORY METABOLISM IN 2 SPECIES OF FISH CARASSIUS-AURATUS-GIBELIO AND CYPRINUS-CARPIO.
SO STUD CERCET BIOL. 28 (2). (RECD 1977) 109-116.
DE TEMPERATURE ADAPTATION.
AN B 63072222.

<799>
AU MARKING, LEIF L. DAWSON, VERDEL K.
IN FISH CONTROL LAB. LA CROSSE. WIS.
YR 73.
TI TOXICITY OF QUINALDINE SULFATE TO FISH.
SO INVEST. FISH CONTR. NO. 47-50. PII/1-II/8. 1973.
LG EN.
DE QUINALDINE SULFATE TOXICITY FISH.
AN C 08023128087.

<800>
AU MARTONOVA M. SKARKA B. RADEJ Z.
YR 72.
TI DEGRADATION OF NAPHTHALENE TO SALICYLIC ACID BY CULTURES OF PSEUDOMONAS DENITRIFICANS AND ACHROMOBACTER SP. FROM THE EFFLUENTS OF PETROLEUM REFINERY.
SO FOLIA MICROBIOL (PRAHA). 17. 1. P63-5. 1972.
LG EN.
MJ ALCALIGENES: ME. PSEUDOMONAS: ME.
MN ALCALIGENES: GD. COLORIMETRY. PSEUDOMONAS: GD.
AN M 72118730.

<801>
AU MARUOKA, SHOJI. NISHIO, TOSHISABURO. KAWAI, SENZO.
IN KYOTO MUNIC. HYG. LAB. KYOTO. JAPAN.
YR 74.
TI SUBACUTE TOXICITY OF CARBON N-HEXANE-ACETONE EXTRACT RECOVERED FROM DRINKING WATER.
SO BULL. ENVIRON. CONTAM. TOXICOL. 11. P545-50. 1974.
LG EN.
DE WATER CONTAMINANT KYOTO CITY.
AN C 08123146552.

<802>
AU MARX J L.
YR 72.
TI PHTHALIC ACID ESTERS: BIOLOGICAL IMPACT UNCERTAIN.
SO SCIENCE. 178. 56. P46-7. 6 OCT 72.
LG EN.
MJ PHTHALIC-ACIDS: AE.

MN ABNORMALITIES-DRUG-INDUCED. BLOOD-PRESERVATION. DE. GUINEA-PIGS. RABBITS.
AN M 73003742.

<803>
AU MASHUR, V. A. IORDAN, E. P.
IN USSR.
YR 72.
TI ROLE OF VITAMIN B12 IN THE METABOLISM OF THE PROPIONIC ACID BACTERIA .
SO VESTN. MOSK. UNIV. BIOL. POCHVOVED. 27. P107-9. 1972.
LG RS.
DE VITAMIN B12 PROPIONIBACTERIUM.
AN C 07715098608.

<804>
AU MASTERS, MARGARET J. ZAJIC, J. E.
IN FAC. ENG. SCI. UNIV. WEST. ONTARIO. LONDON. ONT.
YR 71.
TI MYXOTROPHIC GROWTH OF ALGAE ON HYDROCARBON SUBSTRATES.
SO DEVELOP. IND. MICROBIOL. 12. P77-86. 1971.
LG EN.
DE ALKANE METAB ALGAE. HEPTADECANE METAB ALGAE. SCENEDESMUS HEPTADECANE METAB.
AN C 07609042294.

<805>
AU MATEI V E. POLENOV A L.
TI EFFECT OF HYPERTONIC MEDIUM AND PHENOL INTOXICATION ON THE HYPOTHALAMIC HYPOPHYSEAL NEURO SECRETORY SYSTEM OF THE GUPPY LEBISTES-RETICULATUS.
SO J EVOL BIOCHEM PHYSIOL (ENGL TRANSL ZH EVOL BIOKHIM FIZIOL). 8 (4). 1972 (1973) 343-349.
DE TELEOST WATER POLLUTANT STRESS.
AN B 74051315.

<806>
AU MATEI, V. E.
IN USSR.
YR 73.
TI HYPOTHALAMIC NEUROSECRETION IN LEBISTES RETICULATUS UNDER CONDITIONS OF CHRONIC PHENOL INTOXICATION.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P39-43. 1973.
LG RS.
DE PHENOL HYPOTHALAMUS NEUROSECRETION LEBISTES. FISH PHENOL TOXICITY.
AN C 08017091777.

<807>
AU MATEI, V. E.
IN USSR.
YR 69.
TI EFFECT OF SUBTOXIC CONCENTRATIONS OF PHENOL ON THE FORMATION RATE OF GROUP CONDITIONED REFLEXES IN LEBISTES RETICULATUS.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 19. P62-5. 1969.
LG RS.
DE PHENOL REFLEXES FISH. FISH REFLEXES PHENOL. REFLEXES PHENOL FISH.
AN C 07221109683.

<808>
AU MATEI, V. E. FLEROV, B. A.
IN INST. BIOL. VNUTR. VOD. BOROK. USSR.
YR 70.
TI EFFECT OF SUBTOXIC CONCENTRATIONS OF PHENOL ON THE CONDITIONED REFLEXES OF LEBISTES RETICULATUS.
SO VOP. VOD. TOKSIKOL. P175-81. 1970.
LG RS.
AV TOPACHEVSKII, A. V.
DE LEBISTES CONDITIONED REFLEXES. REFLEXES CONDITIONED LEBISTES. FISH POISONING PHENOL. POISONING FISH PHENOL. PHENOL POISONING FISH.
AN C 07417084579.

<809>
AU MATEL, V. E.
IN INST. BIOL. INLAND WATERS. BOROK. USSR.
YR 73.
TI HYPOTHALAMOHYPOPHYSEAL NEUROSECRETORY SYSTEM OF THE GUPPY LEBISTES RETICULATUS DURING CHRONIC PHENOK INTOXICATION.
SO ZH. EVOL. BIOKHIM. FIZIOL. 9. P481-6. 1973.
LG RS.
DE PHENOL NEUROHORMONE HYPOTHALAMUS PITUITARY. FISH NEUROSECRETION PHENOL. ENDOCRINE SYSTEM PHENOL GUPPY.
AN C 08005023272.

<810>
AU MATSUDA, YOSHIHARU. FUJISAWA, TOSHIO. FUJIKAWA, SHUZO. TAKASU, YOSHIO. TANAKA, YOSHIE. IMAGAWA,

HIROSHI.
IN FAC. ENG. YAMAGUCHI UNIV. UBE. JAPAN.
YR 75.
TI OXIDATION OF CYANIDE IONS IN AQUEOUS ALKALINE SOLUTIONS BY OZONE.
SO NIPPON KAGAKU KAISHI. P602-6. 1975.
LG JA.
DE CYANIDE OXIDN ALK WASTEWATER.
AN C 08310084340.

<811>

AU MATSUDA, YUKIO.
IN TOYO INK MANUF. CO. LTD. TOKYO. JAPAN.
YR 72.
TI TREATMENT AND ANALYSIS METHODS FOR CYANIDES AND THE USE OF CYANIDE CONCENTRATION-MEASURING INSTRUMENTS.
SO NENRYO OYOBI NENSHO. 39. P691-8. 1972.
LG JA.
DE REVIEW CYANIDE TREATMENT WATER.
AN C 07820128129.

<812>

AU MATSUDA, YUKIO.
IN TOYO INK MANUF. CO. LTD. TOKYO. JAPAN.
YR 72.
TI TREATMENT AND ANALYSIS METHODS FOR CYANIDES AND THE USE OF CYANIDE CONCENTRATION-MEASURING INSTRUMENTS.
SO NENRYO OYOBI NENSHO. 39. P691-8. 1972.
LG JA.
DE REVIEW CYANIDE TREATMENT WATER.
AN C 07820128129.

<813>

AU MATSUMOTO, GENKI. ISHIWATARI, RYOSHI. HANYA, TAKAHISA.
IN FAC. SCI. TOKYO METROP. UNIV. TOKYO. JAPAN.
YR 77.
TI GAS CHROMATOGRAPHIC-MASS SPECTROMETRIC IDENTIFICATION OF PHENOLS AND AROMATIC ACIDS IN RIVER WATERS.
SO WATER RES. 11. P693-8. 1977.
LG EN.
DE PHENOL DETN RIVER WATER. AROM ACID DETN RIVER WATER. GAS CHROMATOG RIVER WATER. MASS SPECTROMETRY RIVER WATER. ORG ANALYSIS RIVER WATER .
AN C 08724189171.

<814>

AU MATSUNAGA, KATSUHIKO. NAKAYA, MITSUKO.
IN FAC. FISH. HOKKAIDO UNIV. HAKODATE. JAPAN.
YR 71.
TI DETERMINATION OF CYANIDE BY OXIDATION TO NITRITE.
SO BUNSEKI KAGAKU. 20. P887-9. 1971.
LG JA.
DE CYANIDE DETN. OXIDN CYANIDE DETN. NITRITE CYANIDE DETN. PHOTOMETRY CYANIDE DETN. SULFANILAMIDE CYANIDE DETN. NAPHTHYLETHYLENEDIAMINE CYANIDE DETN.
AN C 07520126047.

<815>

AU MATSUURA, TAKESHI. SMITH, JOE MAUK.
IN UNIV. CALIFORNIA. DAVIS. CALIF.
YR 70.
TI PHOTODECOMPOSITION KINETICS OF FORMIC ACID IN AQUEOUS SOLUTION.
SO AICHE J. 16. P1064-71. 1970.
LG EN.
DE PHOTODECOMPN KINETICS FORMIC ACID SOLN. KINETICS PHOTODECOMPN FORMIC ACID SOLN. FORMIC ACID SOLN PHOTODECOMPN KINETICS. ORG POLLUTANTS REMOVAL WATER MODEL. POLLUTANTS ORG REMOVAL WATER MODEL. MODEL ORG POLLUTANTS REMOVAL WATER.
AN C 07406023941.

<816>

AU MATTHEWS, JOHN E. MYERS, LEON H.
IN ROBERT S. KERR ENVIRONMENTAL RESEARCH LAB. ADA, OKLA.
YR 76. 62P.
TI ACUTE TOXIC EFFECTS OF PETROLEUM REFINERY WASTEWATERS ON REDEAR SUNFISH.
PR PC A04/MF A01.
AB STATIC BIOASSAYS OF 24 HOURS' DURATION WERE PERFORMED ON SAMPLES OF WASTEWATERS PROVIDED BY 22 DOMESTIC PETROLEUM REFINERS. THESE WASTEWATERS REPRESENT THREE TYPES OF WATER DISCHARGES PREVALENT TO THIS INDUSTRY: PROCESS WASTEWATERS PRIOR TO DILUTION WITH OTHER STREAMS; API SEPARATOR EFFLUENTS WHICH ARE A CONJUGATE OF VARIOUS STREAMS WITHIN A REFINERY; AND WASTEWATERS FOLLOWING TREATMENT BY ACTIVATED SLUDGE SYSTEMS. BIOASSAYS WERE PERFORMED USING REDEAR SUNFISH (LEPOMIS MICROLOPHUS) AS TEST ORGANISMS. TWENTY-FOUR HOUR 50

PERCENT TOLERANCE LIMITS (TL SUB 50) OF THE VARIOUS WASTEWATERS ARE COMPARED WITH RESULTS OF CHEMICAL ANALYSES PERFORMED DURING THE SAME STUDY. TOXICITY VARIED CONSIDERABLY BOTH BETWEEN REFINERIES AND FOR WASTE STREAMS FROM WITHIN A SINGLE REFINERY. RESULTS OF THESE ANALYSES AND OBSERVED BEHAVIORAL SYMPTOMS OF DISTRESSED FISH REVEALED THAT AMMONIA, SULFIDES, AND PHENOLICS, ALONE OR IN COMBINATION, WERE MAJOR CONTRIBUTORS TO TOXICITY EXERTED IN MOST SAMPLES. THREE REFINERIES HAD SAMPLES WHICH WERE MORE TOXIC THAN ANTICIPATED BASED ON RESULTS OF CHEMICAL ANALYSES, INDICATING THE PRESENCE OF OTHER TOXIC COMPOUNDS IN UNKNOWN QUANTITIES; E.G. VARIOUS HYDROCARBONS.

MJ FRESH-WATER-FISHES, TOXICITY, INDUSTRIAL-WASTES, REFINERIES.

MN BIOASSAY, WASTE-WATER, ANIMAL-BEHAVIOR, TOXIC-TOLERANCES, HYDROCARBONS, AMMONIA, ORGANIC-SULFIDES, PHENOLS.

ID LEPOMIS-MICROLOPHUS, NTISEPAORD.

AN N PB-262 913/7SL.

<817>

AU MATTSON, VINCENT R. ARTHUR, JOHN W. WALBRIDGE, CHARLES T.

IN ENVIRONMENTAL RESEARCH LAB. DULUTH, MINN.

YR 76. 20P.

TI ACUTE TOXICITY OF SELECTED ORGANIC COMPOUNDS TO FATHEAD MINNOWS.

NT FINAL REPT. FEB 73-JUL 74.

PR PC A02/MF A01.

AB STATIC NONRENEWAL LABORATORY BIOASSAYS WERE CONDUCTED WITH 26 ORGANIC COMPOUNDS COMMONLY USED BY INDUSTRY. THE SELECTED COMPOUNDS REPRESENTED THE FIVE FOLLOWING CHEMICAL CLASSES: ACIDS, ALCOHOLS, HYDROCARBONS, KETONES AND ALDEHYDES, AND PHENOLS. JUVENILE FATHEAD MINNOWS (PIMEPHALES PROMELAS) WERE THE TEST ANIMAL, AND TEST DURATION WAS LIMITED TO 96 HR. LAKE SUPERIOR WATER SERVED AS THE DILUENT SOURCE FOR ALL TEST COMPOUNDS. ADDITIONAL TESTS WERE CONDUCTED WITH A RECONSTITUTED DILUENT WATER FOR FIVE COMPOUNDS. THE ALCOHOL COMPOUNDS WERE GENERALLY 10 TO 100 TIMES LESS TOXIC THAN CHEMICALS TESTED IN THE OTHER FOUR CHEMICAL CLASSES. COMPOUNDS IN THE OTHER FOUR CLASSES HAD A SIMILAR TOXICITY RANGE. THE MOST LETHAL CHEMICAL TESTED WAS PENTACHLOROPHENOL (96-HR LC50 OF 0.6 MG/L.) AND THE LEAST LETHAL WAS ETHANOL (96-HR LC50 OF 13,480 MG/L.). MOST OF THE MINNOW DEATHS OCCURRED DURING THE FIRST 24 HR. COMPARATIVE CHEMICAL TESTS IN THE TWO DILUENT WATERS GAVE SIMILAR LETHAL RESPONSES.

MJ MINNOWS, ORGANIC-COMPOUNDS, TOXICITY.

MN ORGANIC-ACIDS, ALCOHOLS, HYDROCARBONS, KETONES, ALDEHYDES, PHENOLS, MORTALITY, ETHANOLS, CONCENTRATION-COMPOSITION, LETHAL-DOSAGE, CLASSIFICATIONS, BIOASSAY, EXPOSURE.

ID PIMEPHALES-PROMELAS, PHENOL- CHLORO, WATER-POLLUTION-EFFECTS- ANIMALS, NTISEPAORD.

AN N PB-262 897/2SL.

<818>

AU MAYER F. L. JR. SANDERS H O.

YR 73.

TI TOXICOLOGY OF PHTHALIC ACID ESTERS IN AQUATIC ORGANISMS.

SO ENVIRON HEALTH PERSPECT. 3. P153- 7. JAN 73.

LG EN.

MJ MARINE-BIOLOGY.

MN ANIMAL. ENVIRONMENTAL-EXPOSURE. PHTHALIC-ACIDS: ME. UNITED-STATES.

AN M 73177210.

<819>

AU MC DERMOTT, J H. KABLER, P W. WOLF, H W.

IN ECA, ENVIRONMENTAL HEALTH SERVICE, BUREAU OF WATER HYGIENE, DIV. OF CRITERIA AND STANDARDS, ROCKVILLE, MD.

YR 71.

TI HEALTH ASPECTS OF TOXIC MATERIALS IN DRINKING WATER.

SO AMERICAN JOURNAL OF PUBLIC HEALTH AND THE NATION'S HEALTH, 61(11): 2269-2276, NOV. 1971.

LG EN.

AB NONE.

DE TOXIC MATERIALS, WATER CONTAMINATION, WATER QUALITY STANDARDS.

AN P 7006934.

<820>

AU MCCORMACK, LAWRENCE M. GOODMAN, ALAN. JONES, ARTHUR R. SILVESTRI,

ARCHILLE.
IN EDGEWOOD ARSENAL ABERDEEN PROVING GROUND MD. 401007.
YR 76. 20P.
TI A DIRECT METHOD FOR THE DETERMINATION OF PHENOL IN NATURAL WATERS.
NT TECHNICAL REPT. JUN-OCT 74.
PR PC$3.50/MF$3.00.
AB A RAPID, DIRECT PROCEDURE FOR THE DETERMINATION OF PHENOL, SENSITIVE IN THE MICROGRAM RANGE, HAS BEEN DEVISED UTILIZING A MODIFICATION OF THE BERTHELOT REACTION. THE METHOD IS ESPECIALLY APPLICABLE TO WATER SAMPLES AND REQUIRES NO EXTRACTION OR DISTILLATION. PHENOL, AS THE LIMITING FACTOR, PRODUCES A STRONG INDOPHENOL BLUE COLOR, WHICH IS LINEAR IN THE RANGE OF 1 TO 5 UG/ML. CHALLENGE OF THE METHOD WITH 33 POTENTIAL WATER POLLUTANTS SHOWS GOOD SPECIFICITY FOR PHENOLS. (AUTHOR).
MJ WATER-POLLUTION, PHENOLS.
MN TEST-METHODS, METHODOLOGY, LABORATORY-TESTS, LINEARITY.
ID BERTHELOT-REACTION, WATER- ANALYSIS, WATER-DETECTION, NTISDODXA.
AN N AD-A031 155/5SL.

<821>

AU MCDONALD, F. R.
IN BUREAU OF MINES, LARAMIE, WYO. LARAMIE ENERGY RESEARCH CENTER.
YR 74. 13P.
TI THE IDENTIFICATION OF GAMMA-VALEROLACTONE IN WASTE FROM AN OIL-SHALE IN SITU RETORT.
NT REPT. OF INVESTIGATIONS 1974.
PR PC$3.25/MF$2.25.
AB THE COMPOUND GAMMA-VALEROLACTONE HAS BEEN IDENTIFIED IN AN ACID FRACTION ISOLATED FROM WASTE WATER COLLECTED FROM AN IN SITU OIL-SHALE RETORT. INFRARED, NUCLEAR MAGNETIC RESONANCE, AND MASS SPECTROMETRY WERE USED TO CONFIRM THE IDENTIFICATION OF THE FRACTION COLLECTED FROM A GAS CHROMATOGRAPH.
MJ OIL-SHALE, LACTONES, INDUSTRIAL-WASTES, WATER-ANALYSIS.
MN INDUSTRIAL-WATER, WATER- POLLUTION, RETORTS-REACTORS, INFRARED-SPECTRA, NUCLEAR-MAGNETIC- RESONANCE, MASS-SPECTRA.
ID FURANONE-DIHYDRO-METHYL, NTISDIBM.
AN N PB-240 098/4SL.

<822>

AU MCFARREN, EARL F. . MATTHEWS, JOHN M. . LISHKA, RAYMOND J.
IN NATIONAL CENTER FOR URBAN AND INDUSTRIAL HEALTH, CINCINNATI, OHIO.
YR 67. 55P.
TI WATER PHENOLS NO. 1.
NT ENVIRONMENTAL HEALTH SERIES. REPORT OF A STUDY CONDUCTED BY THE ANALYTICAL REFERENCE SERVICE.
PR PC$4.75/MF$0.95.
AB THE OBJECTIVE OF THE STUDY WAS TO EVALUATE THE ABILITY OF METHODS TO QUANTITATIVELY MEASURE A LOW CONCENTRATION OF A MIXTURE OF PHENOLS. THE STUDY CONSISTED OF FOUR CONCENTRATED SOLUTIONS SHIPPED IN SEALED GLASS AMPOULES TO VARIOUS LABORATORIES. THE PARTICIPANTS WERE INSTRUCTED ON RECEIPT TO DILUTE 5 ML OF EACH SAMPLE TO 1 LITER WITH A GOOD QUALITY (PHENOL FREE) DISTILLED WATER, AND WERE INFORMED THAT THE SAMPLES WOULD THEN CONTAIN CONCENTRATIONS OF PHENOL AND 2,4-DICHLOROPHENOL IN THE RANGE OF 1.0 TO 200 MICROGRAM PER LITER. THE DISTILLATION AND CHLOROFORM EXTRACTION (OF THE FINAL COLOR) METHOD WILL MEASURE THE PHENOL CONTENT OF A SAMPLE VERY ACCURATELY AND PRECISELY, BUT IT IS NOT AS SENSITIVE AS IS DESIRED. ON THE OTHER HAND THE SIMPLIFIED AMINOANTIPYRINE METHOD WILL MEASURE NEITHER PHENOL NOR 2,4-DICHLOROPHENOL VERY ACCURATELY OR PRECISELY.
MJ WATER-ANALYSIS, PHENOLS, WATER-POLLUTION, PHENOLS.
MN STANDARDS, ACCURACY.
ID WATER-POLLUTION-DETECTION, PHENOL-DICHLORO, EPAL.
AN N PB-216 209.

<823>

AU MCGINNES, PAUL R. SNOEYINK, VERNON L.
IN ILLINOIS UNIV. URBANA. WATER RESOURCES CENTER.
YR 74. 62P.
TI DETERMINATION OF THE FATE OF POLYNUCLEAR AROMATIC HYDROCARBONS IN NATURAL WATER SYSTEMS.
NT RESEARCH REPT.
PR PC$3.75/MF$1.45.
AB THE POLYNUCLEAR AROMATIC HYDROCARBONS, OR PAH, ARE OF CURRENT CONCERN AS WATER POLLUTANTS AND POTENTIAL HEALTH HAZARDS. THE

PRESENCE OF PAH IN NATURAL WATER SYSTEMS WAS EVALUATED AND AN ANALYTICAL TECHNIQUE FOR SPECIFIC PAH WAS DEVELOPED. IT WAS FOUND THAT THE PAH ARE NOT SOLUBLE IN WATER BUT THEY EITHER ARE PRESENT AS PARTICULATE MATERIAL OR AS MATERIAL ABSORBED ON SOLID SURFACES IN NATURAL WATER SYSTEMS. THE PHOTODECOMPOSITION OF TWO PAH, 1,2 BENZANTHRACENE, OR BA, AND 3,4 BENZPYRENE, OR BP, WAS EXAMINED. THIS DECOMPOSITION IS RELATIVELY UNAFFECTED BY WATER CHEMISTRY AND WILL OCCUR UNDER SOLAR RADIATION AND IN TURBID WATERS.
MJ AROMATIC-POLYCYCLIC- HYDROCARBONS, PHOTOLYSIS.
MN HYDROSOLS, SOLVENT-EXTRACTION, CARCINOGENS, PARTICLES, PARTICLE-SIZE, REACTION-KINETICS, WATER-ANALYSIS, GAS-CHROMATOGRAPHY, ULTRAVIOLET-RADIATION, QUINONES, WATER-POLLUTION.
ID BENZANTHRACENES, BENZOPYRENES, NTISOWRR.
AN N PB-232 168/5.

<824>

AU MCGINNISS M J. BUIKEMA A L JR. CAIRNS J JR.
YR 77.
TI TEMPERATURE EFFECTS ON THE ACUTE TOXICITY OF 2 SIMULATED EFFLUENTS TO DAPHNIA-PULEX CLADOCERA.
SO ASB (ASSOC SOUTHEAST BIOL) BULL. 24 (2). 68-69.
DE ABSTRACT ARBITRARY REFINERY MIXTURE COOLING TOWER BLOWDOWN MIXTURE ZINC PHOSPHATE CHROMATE SULFATE BORON CHROMIUM OIL GREASE PHENOL SULFIDE ACCLIMATION TEMPERATURE MOLT METABOLISM.
AN B 77097351.

<825>

AU MCGONIGLE, E J.
IN MERCK SHARP AND DOHME RESEARCH LABS. PHARMACEUTICAL RESEARCH AND DEVELOPMENT, W. POINT, PA 19486.
YR 75.
TI THIN-LAYER CHROMATOGRAPHIC ANALYSIS IN WASTE CHEMISTRY.
SO CHROMATOGRAPHIC ANALYSIS OF THE ENVIRONMENT. EDITED BY R. L. GRAB. NEW YORK: MARCEL DEKKER, 1975. PP. 639-673.
LG EN.
AB NONE.
ID PHENOLS, STEROLS, TLC.
DE SAMPLING METHODS, POLLUTANT ANALYSIS, PESTICIDES, ORGANIC WASTES, METALS, LIQUID CHROMATOGRAPHY, HYDROCARBONS, HERBICIDES.
AN P 7601855.

<826>

AU MCGUIRE, JOHN M. ALFORD, ANN L. CARTER, MIKE H.
IN ENVIRONMENTAL PROTECTION AGENCY, ATHENS, GA. SOUTHEAST ENVIRONMENTAL RESEARCH LAB.
YR 73. 52P.
TI ORGANIC POLLUTANT IDENTIFICATION UTILIZING MASS SPECTROMETRY.
NT ENVIRONMENTAL PROTECTION TECHNOLOGY SERIES.
AV 73-234.
PR PC-GPO/MF$1.45-NTIS.
AB A SYSTEM HAS BEEN DEVELOPED FOR THE RAPID IDENTIFICATION OF VOLATILE ORGANIC WATER POLLUTANTS. IT INVOLVES COMPUTER CONTROLLED GAS CHROMATOGRAPHY/MASS SPECTROMETRY WITH COMPUTERIZED MATCHING OF MASS SPECTRA. APPLICATION OF THIS SYSTEM TO THE ANALYSIS OF WASTE EFFLUENTS REVEALED A SIGNIFICANT NUMBER OF POLLUTANTS THAT WERE NOT PREVIOUSLY KNOWN TO BE PRESENT. (AUTHOR).
MJ WATER-ANALYSIS, ORGANIC- COMPOUNDS, MASS-SPECTROSCOPY, GAS-CHROMATOGRAPHY.
MN COMPUTERS, AUTOMATIC-CONTROL, DATA-PROCESSING, PESTICIDES, INDUSTRIAL-WASTES, PHENOLS, WATER-POLLUTION, SYNTHETIC-ELASTOMERS, COAL-GASIFICATION.
ID WATER-POLLUTION-DETECTION, EPAORM.
AN N PB-227 163/3.

<827>

AU MCKEE, HERBERT C. TARAZI, DAVID S.
IN SOUTHWEST RESEARCH INST. HOUSTON, TEX.
YR 74. 64P*.
TI DEVELOPMENT OF SAMPLE PREPARATION METHODS FOR ANALYSIS OF MARINE ORGANISMS.
NT ECOLOGICAL RESEARCH SERIES.
AV PAPER COPY ALSO AVAILABLE FROM GPO $1.05.
PR PC$3.75/MF$2.25.
AB THE OVERALL OBJECTIVE OF THE RESEARCH WAS TO DEVELOP METHODS OF SAMPLE PREPARATION SUITABLE FOR PROCESSING, EXTRACTING, PURIFYING,

AND CONCENTRATING SPECIFIC ORGANIC POLLUTANTS FOUND IN MARINE ORGANISMS, SO THAT CHEMICAL ANALYSIS TO MEASURE THESE CONTAMINANTS CAN BE CARRIED OUT. THE INVESTIGATION WAS DIRECTED PRIMARILY AT THE MEASUREMENT OF CONTAMINANTS OF INDUSTRIAL ORIGIN. THE METHODS DEVELOPED PROVIDE NEW TECHNIQUES FOR MEASURING ORGANIC CONTAMINANTS IN WATER TO ESTABLISH MONITORING PROCEDURES, IDENTIFY SOURCES OF CONTAMINATION, EVALUATE METHODS OF TREATMENT, OR FOR OTHER USES IN WATER QUALITY MANAGEMENT. THE TECHNIQUE USED FLAME IONIZATION GAS CHROMATOGRAPHY FOR DETECTION.
MJ GAS-CHROMATOGRAPHY, WATER- ANALYSIS.
MN RESIDUES, INDUSTRIAL-WASTES, WATER-POLLUTION, QUANTITATIVE-ANALYSIS, QUALITATIVE-ANALYSIS, HYDROCARBONS, AROMATIC-COMPOUNDS, ALCOHOLS, MARINE-BIOLOGY, AMINES, GLYCOLS, KETONES, PHENOLS, ESTERS, ORGANIC-SULFIDES.
ID FLAME-IONIZATION, WATER-POLLUTION-DETECTION, NTISEPAORD.
AN N PB-234 201/2.

<828>
AU MCKENNA E J. KALLIO R E.
YR 71.
TI MICROBIAL METABOLISM OF THE ISOPRENOID ALKANE PRISTANE.
SO PROC NATL ACAD SCI U S A. 68 (7). 1552-1554.
DE 2 6-10 14 TETRA METHYL PENTA DECANE.
AN B 52127040.

<829>
AU MCKIM, JAMES M.
IN ENVIRONMENTAL RESEARCH LAB.- DULUTH, MINN.
YR 77. 10P.
TI EVALUATION OF TESTS WITH EARLY LIFE STAGES OF FISH FOR PREDICTING LONG-TERM TOXICITY.
NT JOURNAL ARTICLE. PUB. IN JNL. OF FISHERIES RESEARCH BOARD OF CANADA, V34 N8 P1148-1154 1977.
PR PC A02/MF A01.
AB PARTIAL AND COMPLETE LIFE-CYCLE TOXICITY TESTS WITH FISH, INVOLVING ALL DEVELOPMENTAL STAGES, HAVE BEEN USED EXTENSIVELY IN THE ESTABLISHMENT OF WATER-QUALITY CRITERIA FOR AQUATIC LIFE. DURING EXTENDED CHRONIC EXPOSURES OF FISH TO SELECTED TOXICANTS, CERTAIN DEVELOPMENTAL STAGES HAVE FREQUENTLY SHOWN A GREATER SENSITIVITY THAN OTHERS. IN 56 LIFE-CYCLE TOXICITY TESTS COMPLETED DURING THE LAST DECADE WITH 34 ORGANIC AND INORGANIC CHEMICALS AND FOUR SPECIES OF FISH, THE EMBRYO-LARVAL AND EARLY JUVENILE LIFE STAGES WERE THE MOST, OR AMONG THE MOST, SENSITIVE. TESTS WITH THESE STAGES CAN BE USED TO ESTIMATE THE MAXIMUM ACCEPTABLE TOXICANT CONCENTRATION (MATC) WITHIN A FACTOR OF TWO IN MOST CASES. THEREFORE, TOXICITY TESTS WITH THESE EARLY LIFE STAGES OF FISH SHOULD BE USEFUL IN ESTABLISHING WATER-QUALITY CRITERIA AND IN SCREENING LARGE NUMBERS OF CHEMICALS.
MJ PESTICIDES, TOXICITY, FISHES, WATER-POLLUTION.
MN LIFE-CYCLES, METALS, SEWAGE, BIPHENYL, CHLORINE-ORGANIC-COMPOUNDS, SURVIVAL, EVALUATION, GROWTH, CONCENTRATION-COMPOSITION, TIME, EXPOSURE, SENSITIVITY, PREDICTIONS.
ID REPRINTS, BIPHENYL-CHLORO, POLYCHLORINATED-BIPHENYLS, NTISEPAORD.
AN N PB-272 769/1SL.

<830>
AU MCKOWN, M M. WOLVERTON, B C.
IN NASA, NATIONAL SPACE TECHNOLOGY LABS. BAY ST. LOUIS, MS 39520.
YR 76.
TI WATER HYAEINTHS FOR REMOVAL OF PHENOLS FROM POLLUTED WATERS.
SO AQUATIC BOTANY, 2(3): 191-201, SEPT. 1976.
LG EN.
AB NONE.
ID WATER HYACINTHS, PHENOLS REMOVAL.
DE ANGIOSPERMS, AQUATIC ORGANISMS, POLLUTANT REMOVAL, WATER POLLUTANTS, AROMATIC COMPOUNDS.
AN P 7700295.

<831>
AU MCLEAY, D J.
IN BRITISH COLUMBIA RESEARCH, DIV. OF APPLIED BIOLOGY, VANCOUVER, B.C. V6S 2L2, CAN.
YR 76.
TI A RAPID METHOD FOR MEASURING THE ACUTE TOXICITY OF PULPMILL EFFLUENTS AND OTHER TOXICANTS TO SALMONID FISH AT AMBIENT ROOM TEMPERATURE.
SO CANADA. FISHERIES RESEARCH BOARD.

JOURNAL, 33(6): 1303-1311, JUNE 1976.
LG EN.
AB NONE.
ID DEHYDROABIETIC ACID, PHENOL, COHO SALMON, RAINBOW TROUT.
DE AROMATIC COMPOUNDS, BIOASSAYS, ACIDS, FISH, TOXICITY, OXYGEN, TOXICANTS, ZINC, LINDANE, PAPER INDUSTRY WASTES.
AN P 7605499.

<832>

AU MCLEE A G. KORMENDY A C. WAYMAN M.
YR 72.
TI ISOLATION AND CHARACTERIZATION OF N-BUTANE-UTILIZING MICROORGANISMS.
SO CAN J MICROBIOL. 18. 8. P1191-5. AUG 72.
LG EN.
MJ ALKANES: ME. FUNGI: IP.
MN ALCOHOLS-BUTYL: ME. CHROMATOGRAPHY-GAS. KINETICS.
AN M 72259873.

<833>

AU MCMICHAEL, W. J. FORNEY, A. J. HAYNES, W. P. STRAKEY, J. P. GASIOR, S. J.
IN ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, PITTSBURGH, PA. PITTSBURGH ENERGY RESEARCH CENTER. 9500865.
YR 77. 35P.
TI SYNTHANE GASIFIER EFFLUENT STREAMS.
PR PC A03/MF A01.
AB A SUBSTANTIAL NUMBER OF EXPERIMENTS HAVE BEEN CARRIED OUT WITH THE 4-INCH SYNTHANE PDU GASIFIER, PRIMARILY USING THREE COALS: NORTH DAKOTA LIGNITE, ILLINOIS NO. 6 BITUMINOUS AND MONTANA SUBBITUMINOUS COAL. THESE EXPERIMENTS WERE PERFORMED OVER A WIDE RANGE OF OPERATING CONDITIONS USING SEVERAL COAL FEEDING CONFIGURATIONS. OPERATING PRESSURES RANGED FROM 10 TO 40 ATMOSPHERES AND THE STEAM-TO-COAL AND OXYGEN-TO-COAL RATIOS VARIED FROM 0.45 TO 2.46 AND 0.12 TO 0.51, RESPECTIVELY. THE EFFLUENT STREAMS OF THE GASIFIER HAVE BEEN ANALYZED WITH REGARD TO COMPOSITION. THE MOST INFLUENTIAL FACTORS AFFECTING POLLUTANT YIELDS APPEAR TO BE COAL TYPE AND THE METHOD OF FEEDING COAL TO THE FLUIDIZED BED OF THE GASIFIER (I. E. FREE FALL THROUGH THE CARBONIZER OR BY-PASSING CARBONIZER USING A DIP TUBE). THE DIP TUBE FEEDING OF THE COAL WAS FOUND TO SUBSTANTIALLY REDUCE PHENOL, COD, THIOCYANATE, CYANIDE AND TAR YIELDS ASSOCIATED WITH THE CONDENSATE STREAM. HOWEVER, DIP TUBE FEEDING DID NOT MAKE SIGNIFICANT CHANGES IN THE CONTAMINANTS FOUND IN THE GAS STREAM. THE RANK OF THE COAL BEING GASIFIED WAS BY FAR THE MOST INFLUENTIAL FACTOR AFFECTING THE PRODUCTION OF POSSIBLE ENVIRONMENTAL POLLUTANTS. THE EFFECT OF ADDITIVES ON THE YIELD OF CONTAMINANTS IN BOTH THE GAS AND CONDENSATE EFFLUENT STREAMS WAS CONSIDERED. DUE TO SCATTER OF THE DATA NO SIGNIFICANT EFFECT ON THE PRODUCTION OF CONDENSATE OR GASEOUS CONTAMINANTS DUE TO FEEDING ADDITIVES WITH THE COAL COULD BE OBSERVED. ALTHOUGH THE DATA PRESENTED IS FROM A SMALL SCALE SYNTHANE UNIT AND HAS A SIGNIFICANT AMOUNT OF SCATTER, IT CAN SERVE TO ESTIMATE THE PRODUCTION OF POTENTIAL ENVIRONMENTAL POLLUTANTS WHICH MUST BE TREATED IN COMMERCIAL SYNTHANE GASIFIERS AND THOSE WITH SIMILAR OPERATIONAL PRINCIPLES. (ERA CITATION 02: 042367).
MJ SYNTHANE-PROCESS.
MN AMMONIA, BENZENE, BITUMINOUS- COAL, CARBON-OXYSULFIDE, CHARS, CHLORIDES, COAL-GASIFICATION, COAL- RANK, COAL-TAR, CYANIDES, ENVIRONMENTAL-EFFECTS, FUEL-FEEDING-SYSTEMS, GASEOUS-WASTES, HYDROGEN-SULFIDES, LEACHING, LIGNITE, LIQUID-WASTES, PHENOL, PHOSPHATES, PROCESS-DEVELOPMENT-UNITS, SOLID-WASTES, SUBBITUMINOUS-COAL, THIOCYANATES, THIOPHENE, TOLUENE, XYLENES.
ID ERDA-010404, AIR-POLLUTION, ENVIRONMENTAL-SURVEYS, NTISERDA.
AN N PERC/RI-77/4.

<834>

AU MEAD, S. W. CAMPBELL, J. H. STEPHENS, D. R.
IN CALIFORNIA UNIV. LIVERMORE. LAWRENCE LIVERMORE LAB. AND DEVELOPMENT ADMINISTRATION. 9500007.
YR 77. 15P.
TI GROUND-WATER QUALITY EFFECTS OF AN UNDERGROUND COAL GASIFICATION EXPERIMENT.
NT ANNUAL UNDERGROUND COAL CONVERSION SYMPOSIUM, FALLEN LEAF LAKE,

CALIFORNIA, UNITED STATES OF AMERICA (USA), 6 JUN 1977.

PR PC A02/MF A01.

AB GROUND-WATER SAMPLING AND ANALYSIS HAVE BEEN CARRIED OUT AT THE SITE OF AN IN SITU COAL GASIFICATION EXPERIMENT CONDUCTED BY THE LAWRENCE LIVERMORE LABORATORY (LLL) NEAR GILLETTE, WYOMING. AN IMPORTANT ENVIRONMENTAL QUESTION ASSOCIATED WITH THE IN SITU GASIFICATION OF COAL CONCERNS THE POSSIBILITY THAT REACTION PRODUCTS (ASH AND TARS) LEFT UNDERGROUND FOLLOWING THE GASIFICATION PROCESS MAY LEAD TO THE CONTAMINATION OF LOCAL GROUND WATERS. IN AN EFFORT TO CLARIFY THE SIGNIFICANCE OF THIS PROBLEM, THE WATER FROM MORE THAN 12 WELLS IN THE VICINITY OF AN UNDERGROUND GASIFICATION EXPERIMENT BEFORE, DURING, AND UP TO 6 MONTHS FOLLOWING GASIFICATION WAS SAMPLED. WATER SAMPLES WERE ANALYZED IN THE FIELD AND AT LLL, U.S. GEOLOGICAL SURVEY, AND RESEARCH TRIANGLE INSTITUTE FOR A VARIETY OF CHARACTERISTICS, INCLUDING THE PRESENCE OF 70 INORGANIC ELEMENTS AND COMPOUNDS, PHENOLIC MATERIALS, DISSOLVED ORGANIC CARBON, AND VOLATILE ORGANICS. A GREATLY INCREASED CONCENTRATION OF PHENOLIC MATERIALS (450 MG/L) JUST OUTSIDE THE BURN BOUNDARY, AND A VARIETY OF INORGANIC SPECIES ISSUING FROM WITHIN THE RESIDUAL ASH BED WERE FOUND. ALL CONTAMINANTS DECREASE RAPIDLY WITH DISTANCE, ALTHOUGH ABOVE-BACKGROUND LEVELS OF SOME SPECIES WERE DETECTED 100 FT FROM THE BURN ZONE. SEVERAL IMPORTANT CONTAMINANTS SHOWED A LARGE DECREASE IN CONCENTRATION WITH TIME, POSSIBLY A RESULT OF ADSORPTION. (ERA CITATION 03: 009028).

MJ GROUND-WATER, IN-SITU- GASIFICATION, COAL-GASIFICATION.

MN ASHES, CHEMICAL-ANALYSIS, COAL- TAR, ENVIRONMENTAL-EFFECTS, MONITORING, SAMPLING, TIME- DEPENDENCE, WYOMING.

ID ERDA-520200, ERDA-010400, ERDA-010900, WATER-POLLUTION-DETECTION, WATER-ANALYSIS, NTISDE.

AN N UCRL-79867.

<835>

AU MELDER, L. KAPS, T. TAMVELIUS, H. ARRO, J.

IN USSR.

YR 69.

TI RECOVERY OF A SOLVENT FROM THE PHENOL EXTRACT OF WATER DEPHENOLATION UNITS OF SHALE CONVERSION PLANTS.

SO GORYUCH. SLANTSY. NO. 5. P26-31. 1969.

LG RS.

DE PHENOLS SHALE CONVERSION SOLVENT RECOVERY.

AN C 07512078846.

<836>

AU MELESHCHENKO K F.

YR 75.

TI HYGIENIC STANDARDIZATION OF DI ETHYL BENZENE IN WATER BODIES.

SO GIG SANIT. (6). 90-92.

DE RABBIT TOXICITY ION EXCHANGE RESIN DI VINYL BENZENE MAXIMUM ALLOWABLE CONCENTRATION.

AN B 61034823.

<837>

AU MELESHCHENKO K F. MIRONETS N V. ROZHKOVETSKAIA R K.

YR 67.

TI EXPERIMENTAL DATA ON SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF PHTHALIC ACID (PHTHALIC ANHYDRIDE) IN BODIES OF WATER.

TR EKSPERIMENTAL'NYE DANNYE K OBOSNOVANIIU PREDEL'NO DOPUSTIMOI KOSTSENTRASTSII FTALEVOI KISLOTY (FTALEVOGO ANGIDRIDA) V VODOEMAKH.

SO GIG SANIT. 32. 8. P12-5. AUG 67.

LG RS.

MJ INDUSTRIAL-WASTE.

MN ANIMAL. PHTHALIC-ACIDS: ST.

AN M 69231961.

<838>

AU METSIK, R. BERNOVSKAYA, N. A.

IN USSR.

YR 73.

TI EFFECT OF THE DISSOLVED OXYGEN CONCENTRATION ON THE RATE OF BIOCHEMICAL PHENOLIC SUBSTANCE OXIDATION.

SO GORYUCH. SLANTSY (TALLINN). NO. 4. P27-31. 1973.

LG RS.

DE PHENOL OXIDN OXYGEN WATER. WASTEWATER BIOCHEM OXIDN PHENOL.

AN C 08124158328.

<839>
AU MEYER T. BAKKE T.
IN FROM THE DEPARTMENT OF PHARMACOLOGY, UNIVERSITY OF BERGEN, BERGEN, NORWAY, AND THE BIOLOGICAL STATION OF THE UNIVERSITY OF BERGEN, BERGEN, NORWAY.
YR 77.
TI THE METABOLISM OF BIPHENYL. V. PHENOLIC METABOLITES IN SOME MARINE ORGANISMS.
SO ACTA PHARMACOL TOXICOL (KBH). 40. 2. P201-8. FEB 77.
LG EN.
MJ BIPHENYL-COMPOUNDS: ME, (BIPHENYL-CPDS). ECHINODERMATA: ME.
MN ANIMAL.
AN M 77131218. 7706.

<840>
AU MEYERHOFF, R D.
IN OREGON STATE UNIV. DEPT. OF FISHERIES AND WILDLIFE, CORVALLIS, OR 97331.
YR 75.
TI ACUTE TOXICITY OF BENZENE, A COMPONENT OF CRUDE OIL, TO JUVENILE STRIPED BASS (MORONE SAXATILIS).
SO CANADA. FISHERIES RESEARCH BOARD. JOURNAL, 32(10): 1864-1866, OCT. 1975.
LG EN.
AB NONE.
ID STRIPED BASS, BENZENE, TIBURON.
DE TOXICITY, BIOASSAYS, AROMATIC COMPOUNDS, PETROLEUM WASTES, OIL POLLUTION, FISH, CALIFORNIA COAST.
AN P 7601506.

<841>
AU MEZHNIN, F. I.
IN USSR.
YR 73.
TI HISTOPATHOLOGICAL CHANGES IN ORGANS AND TISSUES OF LEBISTES RETIVULATUS DURING ACUTE EXPERIMENTAL INTOXICATION WITH POLYCHLOROPINENE, PHENOL, AND UNDER INCREASED SALT LOAD.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 24. P53-66. 1973.
LG RS.
DE PHENOL TOXICITY LEBISTES CARASSIUS. POLYCHLOROPINENE TOXICITY LEBISTES CARASSIUS. LEBISTES PHENOL POLYCHLOROPINENE SALT. CARASSIUS PHENOL POLYCHLOROPINENE SALT. FISH PHENOL POLYCHLOROPINENE TOXICITY. SALT TOXICITY LEBISTES CARASSIUS.
AN C 08025141597.

<842>
AU MEZHNIN, F. I.
IN USSR.
YR 73.
TI HISTOLOGICAL CHANGES IN ORGANS AND TISSUES OF LEBISTES RETICULATUS UNDER CONDITIONS OF ACUTE PHENOL INTOXICATION.
SO TR. INST. BIOL. VNUTR. VOD. AKAD. NAUK SSSR. NO. 24. P44-52. 1973.
LG RS.
DE PHENOL TOXICITY LEBISTES. FISH PHENOL TOXICITY. GILL PHENOL LEBISTES . SKIN PHENOL LEBISTES. KIDNEY PHENOL LEBISTES. HEART PHENOL LEBISTES .
AN C 08017091778.

<843>
AU MIDDLEBROOKS, E J. GRENNEY, W J. REYNOLDS, J H. PERCELLA, D B.
IN UTAH STATE UNIV. OF AGRICULTURE AND APPLIED SCIENCE, DEP OF CIVIL ENGINEERING, LOGAN, UT 84321.
YR 75.
TI EFFECTS OF TEMPERATURE ON OIL REFINERY WASTE TOXICITY.
SO WATER POLLUTION CONTROL FEDERATION. JOURNAL, 47(11): 2674- 2693, NOV. 1975.
LG EN.
AB NONE.
ID PHENOL.
DE AROMATIC COMPOUNDS, ALGAE, TOXICITY, TEMPERATURE, REFINERIES, MATHEMATICAL MODELS, KINETICS, INDUSTRIAL EFFLUENTS.
AN P 7602252.

<844>
AU MIELUCH, JOZEF. SODOWSKI, ANDRZEJ. WILD, JAKUB. ZOLTOWSKI, PIOTR.
IN INST. CHEM. FIZ. PAN. WARSAW. POL.
YR 75.
TI ELECTROCHEMICAL OXIDATION OF PHENOL COMPOUNDS IN AN AQUEOUS SOLUTION .
SO PRZEM. CHEM. 54. P513-16. 1975.
LG PO.
DE WASTE WATER PHENOL ELECTROCHEM OXIDN.
AN C 08402010275.

<845>
AU MIGET, R J. OPPENHEIMER, C H. KATOR, H I. LA ROCK, P A.

IN FLORIDA STATE UNIV. DEPT. OF OCEANOGRAPHY, TALLAHASSEE.
YR 69.
TI MICROBIAL DEGRADATION OF NORMAL PARAFFIN HYDROCARBONS IN CRUDE OIL.
SO SEE CITATION NO. P70-04374, PP. 327 - 33L, 1969.
LG EN.
AB NONE.
DE MICROBIAL DEGRADATION, OIL SPILLS, HYDROCARBONS, BIODEGRADATION.
AN P 7004407.

<846>
AU MIGUEL, ANTONIO HORACIO.
IN UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN (0090) PH.D. 1976, 143PP.
YR 76.
TI STUDIES OF GAS-SOLID REACTIONS OF ENVIRONMENTAL SIGNIFICANCE: I. PYRENE ADSORPTION ONTO FLY ASH. II. THIOL OXIDATION AND ADSORPTION BY ACTIVATED CARBON.
SO DAI V37(01), SEC B, P0182.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG76-16170.

<847>
AU MIKRYAKOVA, T. F. KLAIN, N. P.
IN USSR.
YR 75.
TI EFFECT OF VARIOUS DOSES OF MINERAL NITROGEN ON THE MICROBIOLOGICAL DEGRADATION OF PHENOL.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. 30. P130-4. 1975.
LG RS.
DE PHENOL DEGRDN MICROBIOL NITRATE. OXYGEN DEGRDN PHENOL MICROBIOL.
AN C 08524181851.

<848>
AU MILLER D L. OGILVIE D M.
YR 75.
TI TEMPERATURE SELECTION IN BROOK TROUT SALVELINUS-FONTINALIS FOLLOWING EXPOSURE TO DDT POLY CHLORINATED BI PHENYL OR PHENOL.
SO BULL ENVIRON CONTAM TOXICOL. 14 (5). 545-551.
DE PESTICIDE POLLUTANTS THERMO REGULATION.
AN B 77020392.

<849>
AU MINASYAN, K. V. VRTANESYAN, S. G. BADALYAN, M. A.
IN USSR.
YR 71.
TI CREOSOL DETERMINATION IN WASTE WATERS OF BENEFICIATION PLANTS.
SO NAUCH. TR. NAUCH.-ISSLED. GORNOMET. INST. NO. 9. P143-8. 1971.
LG RS.
DE CRESOL DETN WATER. WATER ANALYSIS CRESOL.
AN C 07822139995.

<850>
AU MIRRLEES, MARGARET S. MOULTON, STUART J. MURPHY, CHRISTOPHER T. TAYLOR, PETER J.
IN PHARM. DIV. IMP. CHEM. IND. LTD. ALDERLEY PARK/MACCLESFIELD/CHESHIRE . ENGL.
YR 76.
TI DIRECT MEASUREMENT OF OCTANOL- WATER PARTITION COEFFICIENTS BY HIGH-PRESSURE LIQUID CHROMATOGRAPHY.
SO J. MED. CHEM. 19. P615-19. 1976.
LG EN.
DE PARTITION HIGH PRESSURE LIQ CHROMATOG. CHROMATOG LIQ PARTITION COEFF .
AN C 08421145014.

<851>
AU MIRSON I M. VILENCHIK M M. RUNOVA Y N. SUKHORUKOV B I.
YR 71.
TI EFFECT OF THE CARCINOGENIC HYDRO CARBON 3 4 BENZ PYRENE ON THE SURVIVAL OF IRRADIATED ESCHERICHIA-COLI K-12 BACTERIA.
SO RADIOBIOLOGIYA. 11 (5). 792-793.
DE ENZYME DNA REPAIR MUTANT.
AN B 54062704.

<852>
AU MIRZAYANOV, V. S. BUGROV, YU. F.
IN USSR.
YR 72.
TI GAS-CHROMATOGRAPHIC DETERMINATION OF ORGANIC IMPURITIES IN WASTE WATERS.
SO ZAVOD. LAB. 38. P656. 1972.
LG RS.
DE GAS CHROMATOG ORG WASTE WATER. ETHYLBENZENE DETN WASTE WATER. STYRENE DETN WASTE WATER. ACETOPHENONE DETN WASTE WATER. METHYLPHENYLCARBINOL DETN WASTE WATER. PHENOL DETN WASTE WATER.
AN C 07718117957.

<853>
AU MITCHELL, B L. SIMMONDS, P G. SHAIR, F H.
YR 73.
TI OIL SPILL IDENTIFICATION WITH MICROENCAPSULATED COMPOUNDS SUITABLE FOR ELECTRON CAPTURE.
SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, 7(2): 121-124, FEB. 1973.
LG EN.
AB NONE.
ID ELECTRON CAPTURE, ACTIVE TAGGING TECHNIQUE, SPILL IDENTIFICATION, FREON 113.
DE GAS CHROMATOGRAPHY, POLLUTANT DETECTION, OIL SPILLS.
AN P 7401351.

<854>
AU MITROVIC, V.
IN FOOD AGRIC. ORGAN. UNITED NATIONS. ROME. ITALY.
YR 73.
TI WATER QUALITY CRITERIA FOR EUROPEAN FRESHWATER FISH. MONOHYDRIC PHENOLS AND INLAND FISHERIES.
SO WATER RES. 7. P929-41. 1973.
LG EN.
DE REVIEW PHENOL TOXICITY FISH. WASTE PHENOL TOXICITY FISH REVIEW.
AN C 07909049573.

<855>
AU MIURA, YOSHIHARU. OKAZAKI, MITSUO. MURAKAWA, SHINICHI. HAMADA, SHINICHIRO. OHNO, KYOKO.
IN FAC. PHARM. SCI. OSAKA UNIV. SUITA. JAPAN.
YR 77.
TI ASSIMILATION OF LIQUID HYDROCARBON BY MICROORGANISMS. II. GROWTH KINETICS.
SO BIOTECHNOL. BIOENG. 19. P715-26. 1977.
LG EN.
DE CANDIDA GROWTH TETRADECANE KINETICS.
AN C 08625187631.

<856>
AU MOCHIZUKI, AIJI. TABATA, JUNICHIRO. USUI, AKIRA. KOIDE, KIYOSHI.
IN TOHO RES. INST. TOHO GAS CO. NAGOYA. JAPAN.
YR 69.
TI SOLVENTS FOR EXTRACTION OF PHENOL FROM WASTE WATER.
SO AROMATIKKUSU. 21. P690-5. 1969.
LG JA.
DE PHENOL EXTN WASTE WATERS. EXTN PHENOL WASTE WATERS. SOLVENTS PHENOL EXTN WASTE WATERS.
AN C 07220103492.

<857>
AU MOLDER, L. TAMVELIUS, H.
IN USSR.
YR 70.
TI EXTRACTION OF PHENOLS FROM SHALE TAR WATERS IN SUCCESSION WITH TWO POLAR SOLVENTS. 2.
SO TR. TALLIN. POLITEKH. INST. NO. 285. P101-10. 1970.
LG RS.
DE SHALE TAR WATER DEPHENOLIZING.
AN C 07622129730.

<858>
AU MOLDER, L. TAMVELIUS, H.
IN USSR.
YR 70.
TI EXTRACTION OF PHENOLS FROM SHALE TAR WATERS IN SUCCESSION WITH TWO POLAR SOLVENTS. 1.
SO TR. TALLIN. POLITEKH. INST. NO. 285. P87-100. 1970.
LG RS.
DE SHALE TAR WATER DEPHENOLIZING.
AN C 07622129729.

<859>
AU MONTGOMERY, H A C. GARDINER, DEIRDRE K. GREGORY, J G G.
IN WATER POLLUTION RESEARCH LAB. STEVENAGE, HERTS. ENG.
YR 69.
TI DETERMINATION OF FREE HYDROGEN CYANIDE IN RIVER WATER BY A SOLVENT-EXTRACTION METHOD.
SO ANALYST, 94: 284-291, APRIL 1969.
LG EN.
AB NONE.
ID SOLVENT EXTRACTION.
DE RIVERS, HYDROGEN CYANIDE, CYANIDE WASTES, COLORIMETRY, AQUATIC ORGANISMS.
AN P 7002933.

<860>
AU MOORE D E.
IN DEPARTMENT OF PHARMACY, UNIVERSITY OF SYDNEY, SYDNEY, N.S.W. 2006, AUSTRALIA.
YR 76.
TI ANTIOXIDANT EFFICIENCY OF POLYHYDRIC PHENOLS IN PHOTOOXIDATION OF

BENZALDEHYDE.
SO J PHARM SCI. 65. 10. P1447-51. OCT 76.
LG EN.
MJ ANTIOXIDANTS.
MN CHEMISTRY. TEMPERATURE.
AN M 77031136. 7702.

<861>

AU MORI, ITSUHIKO. CHIKIU, SHUMPEI.
IN KOBE WOMEN'S COLL. PHARM. KOBE. JAPAN.
YR 72.
TI QUANTITATIVE DETERMINATION OF PHENOLS BY AN ANODIC OXIDATION WAVE USING A MERCURY POOL ELECTRODE DURING CHROMATOGRAPHY.
SO J. CHROMATOGR. 64. P390-2. 1972.
LG EN.
DE PHENOLS DETN. PAPER ELECTROCHROMATOG PHENOLS. PHLOROGLUCINOL DETN. NAPHTHOL DETN. PYROGALLOL DETN. HYDROQUINONE DETN. RESORCINOL DETN. CRESOL DETN.
AN C 07614080875.

<862>

AU MORITA, MASATOSHI. NAKAMURA, HIROSHI. NIMURA, SHUICHI.
IN DEP. ENVIRON. HEALTH. TOKYO METROP. RES. LAB. PUBLIC HEALTH. TOKYO. JAPAN.
YR 73.
TI ORGANIC SUBSTANCES IN THE WATER SYSTEM. I. PHTHALIC ACID ESTERS (DOP AND DBP) IN THE WATER.
SO TOKYO TORITSU EISEI KENKYUSHO KENKYU NEMPO. P351-5. 1973.
LG JA.
DE PHTHALIC ACID ESTER POLLUTION WATER.
AN C 08018099936.

<863>

AU MOSESCU, NICOLAE. KALMUTCHI, GEORGE.
IN ROM.
YR 76.
TI GRAPHICAL METHOD FOR DETERMINING THE CONCENTRATION OF TWO COMPONENTS .
SO REV. CHIM. (BUCHAREST). 27. P789-90. 1976.
LG RO.
DE SPECTROCHEM ANAL MIXT GRAPHICAL CALCN. WASTE WATER ANALYSIS HYDROCARBON PHOTOMETRY. BENZENE DETN WASTE WATER. ETHYLBENZENE DETN WASTE WATER.
AN C 08620150118.

<864>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF BUTANOL FOR FISHERY WATER BODIES.
SO IZV. GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. 109. P72-91 . 1976.
LG RS.
DE INVERTEBRATE BENTHOS BUTANOL. DAPHNIA BUTANOL WATER. BUTANOL WATER FISHERY.
AN C 08720156568.

<865>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI ESTABLISHMENT OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF PYRIDINE FOR FISHERY WATER BODIES.
SO IZV. GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. 109. P58-64. 1976.
LG RS.
DE PYRIDINE WATER POLLUTION STD. TOXICITY PYRIDINE FISHERY WATER.
AN C 08718140968.

<866>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI DATA ON THE SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF NAPHTHALENE FOR FISHERY WATER BODIES.
SO IZV. GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. 109. P50-71 . 1976.
LG RS.
DE NAPHTHALENE WATER POLLUTION STD. TOXICITY NAPHTHALENE FISHERY WATER.
AN C 08718140967.

<867>

AU MOSEVICH, M. V. ARSHANITSA, N. M.

GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI EXPERIMENTAL SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF O-CRESOL FOR FISHERY WATER BODIES.
SO IZV. GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. 109. P42-91 . 1976.
LG RS.
DE CRESOL WATER POLLUTION STD. CRESOL TOXICITY FISHERY WATER.
AN C 08718140966.

<868>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF RESORCINOL FOR FISHERY WATER BODIES.
SO IZV. GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. 109. P34-41. 1976.
LG RS.
DE RESORCINOL WATER POLLUTION STD. TOXICITY RESORCINOL FISHERY WATER.
AN C 08718140965.

<869>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI BASIS FOR THE MAXIMUM PERMISSIBLE CONCENTRATION OF BUTYL ALCOHOL FOR FISH HATCHERY PONDS.
SO IZV. NII OZ. I RECH. RYB. KH-VA. P72-9. 1976.
LG RS.
DE BUTYL ALC FISK POND STD.
AN C 08709063646.

<870>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI EXPERIMENTAL SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF O-CRESOL IN THE WATER OF FISHERY PONDS.
SO IZV. NII OZ. I PECH. RYB. KH-VA. P42-9. 1976.
LG RS.
DE FISH POND CRESOL STD.
AN C 08708058304.

<871>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. GRIGOR'EVA, I. G. LEVI, L. A. PUSTOVOIT, A. G. SERGEEVA, V. A.
IN USSR.
YR 76.
TI MATERIALS FOR SUBSTANTIATING THE MAXIMUM PERMISSIBLE CONCENTRATION OF NAPHTHALENE FOR FISHERY PONDS.
SO IZV. NII OZ. I PECH. RYB. KH-VA. P50-7. 1976.
LG RS.
DE FISH POND NAPHTHALENE STD.
AN C 08708058303.

<872>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. LEVI, L. A. MAKRUSHIN, A. V. PUSTOVOIT, A. G. SERGEEVA, V. A. CHINNOVA, R. F.
IN USSR.
YR 76.
TI SUBSTANTIATION OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF ANILINE FOR FISHERY WATER BODIES.
SO IZV. GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. 109. P22-33. 1976.
LG RS.
DE ANILINE WATER POLLUTION STD. TOXICITY ANILINE FISHERY WATER.
AN C 08718140964.

<873>

AU MOSEVICH, M. V. ARSHANITSA, N. M. GLUKHOVA, L. V. LEVI, L. A. MAKRUSHIN, A. V. PUSTOVOIT, A. G. SERGEEVA, V. A. CHINNOVA, R. F.
IN USSR.
YR 76.
TI BASIS FOR THE MAXIMUM PERMISSIBLE CONCENTRATION OF ANILINE FOR FISH HATCHERY PONDS.
SO IZV. NII OZ. I RECH. RYB. KH-VA. P22-3. 1976.
LG RS.
DE ANILINE FISH POND.
AN C 08705034079.

<874>
AU MOTOHIRO T. ISEYA Z.
YR 76.
TI EFFECTS OF WATER POLLUTED BY OIL ON AQUATIC ANIMALS PART 2 N PARAFFINS AROMATIC HYDRO CARBONS AND CRUDE OIL CONCENTRATION ON TAINT IN SCALLOP PECTEN-YESSOENSIS.
SO BULL FAC FISH HOKKAIDO UNIV. 26 (4). 367-371.
DE XYLENE TOLUENE.
AN B 63072239.

<875>
AU MOTOHIRO, TERUSHIGE. INOUE, NORIO.
IN FAC. FISH. HOKKAIDO UNIV. HAKODATE. JAPAN.
YR 73.
TI N-PARAFFINS IN POLLUTED FISH BY CRUDE OIL FROM JULIANA WRECK.
SO HOKKAIDO DAIGAKU SUISAN GAKUBU KENKYU IHO. 23. P204-8. 1973.
LG JA.
DE PARAFFIN FISH WATER POLLUTION.
AN C 08105021852.

<876>
AU MOTOHIRO, TERUSHIGE. ISEYA, ZENSUKE.
IN FAC. FISH. HOKKAIDO UNIV. HAKODATE. JAPAN.
YR 76.
TI EFFECTS OF OIL-POLLUTED WATER ON AQUATIC ANIMALS. III. PRETREATMENT IN DETECTION OF N-PARAFFINES IN MARINE SEDIMENTS BY GAS CHROMATOGRAPHY.
SO HOKKAIDO DAIGAKU SUISAN GAKUBU KENKYU IHO. 26. P372-80. 1976.
LG EN.
DE PARAFFIN MARINE SEDIMENT POLLUTION. GAS CHROMATOG POLLUTION SEDIMENT .
AN C 08618126946.

<877>
AU MOTOHIRO, TERUSHIGE. ISEYA, ZENSUKE.
IN FAC. FISH. HOKKAIDO UNIV. HAKODATE. JAPAN.
YR 76.
TI EFFECTS OF OIL-POLLUTED WATER ON AQUATIC ANIMALS. II. N-PARAFFINS, AROMATIC HYDROCARBONS AND CRUDE OIL CONCENTRATION IN THE TAINT OF THE SCALLOP, PECTEN YESSOENSIS.
SO HOKKAIDO DAIGAKU SUISAN GAKUBU KENKYU IHO. 26. P367-71. 1976.
LG EN.
DE SCALLOP TAINT PARAFFIN. HYDROCARBON AROM SCALLOP TAINT. PETROLEUM SCALLOP TAINT.
AN C 08611066355.

<878>
AU MRKVA, MIROSLAV.
IN WATER RES. INST. OSTRAVA. CZECH.
YR 75.
TI AUTOMATIC UV CONTROL SYSTEM FOR RELATIVE EVALUATION OF ORGANIC WATER POLLUTION.
SO WATER RES. 9. P587-9. 1975.
LG EN.
DE WATER ANALYSIS UV SPECTROPHOTOMETRY. DISSOLVED ORG ANALYSIS AUTOMATIC . HUMIC MATTER ANALYSIS UV. LIGNIN MATTER ANALYSIS UV. PHENOLIC MATTER ANALYSIS UV. UV AUTOMATIC WATER MONITOR. SEWAGE EFFLUENT ANALYSIS ORG. TURBIDITY COMPENSATION UV ANALYSIS.
AN C 08312102859.

<879>
AU MUELLER, W P. KORTE, F.
IN GESELLSCHAFT FUER STRAHLEN-UND UNWELTFORSCHUNG M.B.H. INSTITUT FUER OEKOLOGISCHE CHEMIE, 8 MUENCHEN 2, LANDWEHRSTRASSE 61, FRG.
YR 75.
TI MICROBIAL DEGRADATION OF BENZO-(A)-PYRENE, MONOLINURON, AND DIELDRIN IN WASTE COMPOSTING.
SO CHEMOSPHERE; CHEMISTRY, PHYSICS, AND BIOLOGY AS FOCUSED ON ENVIRONMENTAL PROBLEMS, 4(3): 197- 198, JUNE 1975.
LG EN.
AB NONE.
ID MONOLNURON, BENZO-A-PYRENE.
DE AMIDES, COMPOSTING, BIODEGRADATION, AROMATIC COMPOUNDS, PESTICIDES, MICROBIAL ACTIVITY, DIELDRIN.
AN P 7600966.

<880>
AU MUKHERJEE S. BHATTACHARYA S.
IN DEPARTMENT OF ZOOLOGY, VISVA-BHARATI UNIVERSITY, SANTINIKETAN 731235,WEST BENGAL, INDIA.
YR 74.
TI EFFECT OF SOME INDUSTRIAL POLLUTANTS ON FISH BRAIN CHOLINESTERASE ACTIVITY.
SO ENVIRON PHYSIOL BIOCHEM. 4. 5. P226-31. 1974.
LG EN.
MJ AMMONIA: PD. FISHES. PD.

MN AMMONIA: TO. DEPRESSION- CHEMICAL. SULFATES: TO. SULFATES- INORGANIC. WATER-POLLUTION-CHEMICAL.
AN M 75167807.

<881>

AU MUNJKO, I. PAVLETIC, Z. MILKICAN, RUZICA.
IN LAB. WATER RES. OKI. ZAGREB. YUGOSLAVIA.
YR 74.
TI REACTION TIME AND SLUDGE ACTIVITY AT DIFFERENT PHENOL CONCENTRATIONS .
SO ARH. HIG. RADA TOKSIKOL. 25. P285-91. 1974.
LG CR.
DE PHENOL BIODEGRDN WASTEWATER.
AN C 08212076796.

<882>

AU MUNROE, K A. DAVIS, P L.
IN ARS, U.S. HORTICULTURAL RESEARCH LAB. ORLANDO, FL 3280.
YR 77.
TI DETERMINATION OF BIPHENYL BY GAS AND LIQUID CHROMATOGRAPHY.
SO JOURNAL OF AGRICULTURAL AND FOOD CHEMISTRY, 25(2): 426-428, MAR. - APR. 1977.
LG EN.
AB NONE.
ID IMPREGNATED PADS, CITRUS FRUITS, BIPHENYL.
DE LIQUID CHROMATOGRAPHY, GAS CHROMATOGRAPHY, FUNGICIDES, PESTICIDES, FOODS, AGRICULTURAL CROPS, VAPORS.
AN P 7704726.

<883>

AU MURAKAMI A. MATSUDA T. WATANABE N. NAGASAWA S.
YR 76.
TI DEGRADATION OF N PARAFFIN MIXTURE BY MARINE MICROORGANISMS IN ENRICHED SEA WATER MEDIUM.
SO J OCEANOGR SOC JPN. 32 (5). (RECD 1977) 242-248.
DE CAULOBACTER-SP FLAVOBACTERIUM-SP PETROLEUM POLLUTANT JAPAN.
AN B 63068450.

<884>

AU MURRAY D A J.
YR 75.
TI TRACE ANALYSIS OF PHENOLS IN WATER BY GAS CHROMATOGRAPHY.
SO J FISH RES BOARD CAN. 32 (2). 292-294.
DE CRESOLS XYLENOLS METHOD POLLUTION.
AN B 60069402.

<885>

AU MUSSELWHITE, C. C. PETTS, K. W.
IN WATER POLLUT. RES. LAB. DEP. ENVIRON. ENGL.
YR 74.
TI AUTOMATED METHOD FOR THE DETERMINATION OF FORMALDEHYDE IN SEWAGE AND SEWAGE EFFLUENTS.
SO WATER POLLUT. CONTROL. 73. P443- 8. 1974.
LG EN.
DE FORMALDEHYDE DETN SEWAGE.
AN C 08124158243.

<886>

AU MYTELKA A I.
YR 72.
TI CHEMICALS AND ALLIED PRODUCTS.
SO J WATER POLLUT CONTROL FED. 44 (6). 1113-1115.
DE MICROORGANISMS LAGOON POLLUTION ABATEMENT CHLORO PHENOLIC WASTE BLEACH PLANT PHENOLIC RESIN BIOCHEMICAL OXYGEN DEMAND.
AN B 72075390.

<887>

AU NACHTIGALL M H. BUTLER R G.
YR 74.
TI METABOLISM OF PHENOLS AND CHLORO PHENOLS BY ACTIVATED SLUDGE MICROORGANISMS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 74. 184.
DE ABSTRACT BACTERIA PSEUDOMONAS-SP ACINETOBACTER-SP NOCARDIA-SP.
AN B 74096296.

<888>

AU NAGANO, MANGI. YOSHIMURA, HIROSHI. ONISHI, NOBORU.
IN CENT. PREV. POLLUT. OKAYAMA. JAPAN.
YR 73.
TI DETERMINATION OF TOTAL CYANIDE IN AGRICULTURAL WATER.
SO KOGYO YOSUI. P49-52. 1973.
LG JA.
DE CYANIDE DETN AGRICULTURAL WATER. AGRICULTURAL WATER ANALYSIS CYANIDE .
AN C 08102006188.

<889>

AU NAGASAWA K. UCHIYAMA H. OGAMO A. SHINOZUKA T.
IN SCHOOL OF PHARMACEUTICAL SCIENCES, KITASATO UNIVERSITY, TOKYO, 108, JAPAN.
YR 77.
TI GAS CHROMATOGRAPHIC DETERMINATION OF MICROAMOUNTS OF CARBARYL AND 1-NAPHTHOL IN NATURAL WATER AS SOURCES OF WATER SUPPLIES.
SO J CHROMATOGR. 144. 1. P77-84. 21 NOV 77.
LG EN.
MJ NAPHTHOLS: AN. WATER-POLLUTANTS-CHEMICAL: AN.
MN CHROMATOGRAPHY-GAS.
AN M 78026759. 7802.

<890>

AU NAGATA, EIZO. KINOSHITA, SHINICHI. OKADA, HIROSUKE.
IN DEP. FERMENT. TECHNOL. OSAKA UNIV. SUITA. JAPAN.
YR 76.
TI DEGRADATION OF PHTHALIC ACID ESTERS BY BACTERIA.
SO HAKKO KOGAKU ZASSHI. 54. P631-4. 1976.
LG JA.
DE DOP DEGRDN BACTERIA. PHTHALATE ESTER DEGRDN BACTERIA.
AN C 08606033856.

<891>

AU NAGBHUSHANAM, R. DIWAN, A. D.
IN DEP. ZOOL. MARATHWADA UNIV. AURANGABAD. INDIA.
YR 72.
TI EFFECT OF TOXIC SUBSTANCES ON OXYGEN CONSUMPTION OF THE FRESHWATER CRAB, BARYTELPHUSA CUNICULARIS.
SO MARATHWADA UNIV. J. SCI. SECT. A. 11. P127-9. 1972.
LG EN.
DE CRAB RESPIRATION COPPER CYANIDE. OXALATE BARYTELPHUSA RESPIRATION.
AN C 08209052310.

<892>

AU NAMBUDIRI, A. M. D. RAO, P. V. SUBBA. BHAT, JANARDHANA V.
IN MICROBIOL. PHARMACOL. LAB. INDIAN INST. SCI. BANGALORE. INDIA.
YR 70.
TI METABOLISM OF AROMATIC COMPOUNDS BY AN ALTERNARIA SPECIES.
SO PHYTOCHEMISTRY. 9. P687-93. 1970.
LG EN.
DE CINNAMIC ACID ALTERNARIA. ALTERNARIA CINNAMIC ACID. BENZOIC ACID ALTERNARIA.
AN C 07307032599.

<893>

IN NATIONAL ENVIRONMENTAL RESEARCH CENTER, CINCINNATI, OHIO. ANALYTICAL QUALITY CONTROL LAB.
YR 71. 298P.
TI METHODS FOR CHEMICAL ANALYSIS OF WATER AND WASTES.
AV 16020-07/71.
PR PC-GPO/MF$0.95-NTIS.
AB THE HANDBOOK DESCRIBES CHEMICAL ANALYTICAL PROCEDURES TO BE USED IN WATER QUALITY OFFICE (WQO) LABORATORIES. EXCEPT WHERE NOTED UNDER 'SCOPE AND APPLICATION' FOR EACH CONSTITUENT, THE METHODS CAN BE USED FOR THE MEASUREMENT OF THE INDICATED CONSTITUENT IN BOTH WATER AND WASTEWATERS AND IN BOTH SALINE AND FRESH WATER SAMPLES. INSTRUMENTAL METHODS HAVE BEEN SELECTED IN PREFERENCE TO MANUAL PROCEDURES BECAUSE OF THE IMPROVED SPEED, PRECISION, AND ACCURACY. PROCEDURES FOR THE TECHNICON AUTOANALYZER HAVE BEEN INCLUDED FOR LABORATORIES HAVING THIS EQUIPMENT AVAILABLE.
MJ WATER-ANALYSIS, HANDBOOKS, WATER-POLLUTION, WATER-ANALYSIS, SEWAGE, WATER-ANALYSIS, INDUSTRIAL-WASTES, WATER-ANALYSIS.
MN ACIDITY, ALKALINITY, ARSENIC, BIOCHEMICAL-OXYGEN-DEMAND, CHLORIDES, COLOR, CYANIDES, DISSOLVED-GASES, OXYGEN, FLUORIDES, METALS, TRACE-ELEMENTS, MERCURY, NITROGEN, OILS, DISSOLVED-ORGANIC-MATTER, PHENOLS, PHOSPHORUS, SELINIUM, SOLIDS, SULFATES, SULFIDES, ODORS, WATER-QUALITY, TURBIDITY.
ID WATER-POLLUTION-DETECTION, CHEMICAL-OXYGEN-DEMAND, ACETIC-ACID-NITRILO-TRI.
AN N PB-211 968.

<894>

AU NAZARENKO, I. V.
IN BUREAU OF COMMERCIAL FISHERIES, WASHINGTON, D.C. OFFICE OF FOREIGN FISHERIES (TRANSLATIONS).
YR 70. 6P.
TI EFFECT OF FORMALDEHYDE ON AQUATIC

ORGANISMS (VLIYANIE FORMALDEGIDA NA VODNYE ORGANIZMY).

NT TRANS. OF VSESOYUZNOE GIDROBIOLOGICHESKOE OBSHCHESTVO. TRUDY (USSR) V10 P170-174 1960. BY ROBERT M. HOWLAND.

PR PC$3.00 MF$0.95.

AB FORMALDEHYDE IS WIDELY EMPLOYED IN INDUSTRY, AND, AS A WASTE PRODUCT OF PRODUCTION, IS DISCARDED INTO BODIES OF WATER WITH THE WASTE WATERS. THE REPORT IS PART OF THE WORK ON THE ESTABLISHMENT OF A MAXIMUM PERMISSIBLE CONCENTRATION OF FORMALDEHYDE IN BODIES OF WATER. ATTEMPTS WERE MADE TO ASCERTAIN AT WHAT CONCENTRATIONS IN THE WATER FORMALDEHYDE CAN EXERT A HARMFUL INFLUENCE ON THE AQUATIC ORGANISMS LIVING IN WATERS. TESTS WERE CONDUCTED ON FRY OF THE VERKHOVKA (LEUCASPIUS DELINEATUS), DAPHNIA (DAPHNIA MAGNA), HORNWORT (CERATOPHYLLUM DEMERSUM) AND A PROTOCOCCAL ALGA (ANKISTRODESMUS FALCATUS). THE EFFECT OF FORMALDEHYDE AT CONCENTRATIONS FROM 1 TO 50 MG/L WAS STUDIED. THE STUDY ORGANISMS PLACED IN THE ORIGINAL WATER WITHOUT FORMALDEHYDE SERVED AS THE CONTROL. (AUTHOR).

MJ AQUATIC-ANIMALS, FORMALDEHYDE.

MN FISHES, WATER-POLLUTION, EFFECTIVENESS, WASTE-WATER, PERMISSABLE-DOSAGE, AQUATIC-PLANTS, INDUSTRIAL-WASTES, CRUSTACEA, ALGAE, USSR, TRANSLATIONS.

AN N PB-196 702T.

<895>

AU NEELY, W. C. SMITH, R. C. CODY, R. M. MCDUFFIE, J. R. JR. LANSDEN, J. A.

IN AUBURN UNIV. ALA. WATER RESOURCES RESEARCH INST.

YR 73. 121P*.

TI BIOLOGICAL AND PHOTOBIOLOGICAL ACTION OF POLLUTANTS ON AQUATIC MICROORGANISMS.

NT COMPLETION REPT.

PR PC$5.45/MF$0.95.

AB THE VARIOUS ASPECTS OF THE BIOLOGICAL AND PHOTOBIOLOGICAL ACTION OF POLLUTANTS ON AQUATIC MICROORGANISMS HAVE BEEN EXPLORED IN A SERIES OF STUDIES COVERING A WIDE RANGE OF CHEMICAL SPECIES AND TWO CLASSES OF AQUATIC MICROORGANISMS, PARAMECIA AND BACTERIA. CERTAIN METAL IONS, INSECTICIDES, POLYCYCLIC AMINES AND MYCOTOXINS ARE CAPABLE OF DRASTIC ALTERATION OF THE LIFE PROCESSES IN TEST STRAINS OF EITHER BACTERIA OR PARAMECIA OR BOTH. IN SOME CASES CONCURRENT EXPOSURE TO LIGHT AND THE POLLUTANT WAS NECESSARY AND IN OTHERS THE TOXIC AND/OR MUTAGENIC REACTIONS WERE INDEPENDENT OF LIGHT EXPOSURE. IN PARTICULAR THE URANYL ION, BETA NAPHTHYL AMINE, AND AFLATOXIN B1 WERE PHOTOTOXIC WHILE THE INSECTICIDE, PHYGON, WAS STRONGLY DARK-TOXIC. ALL AGENTS AFFECTED PARAMECIUM CAUDATUM AND ALL BUT AFLATOXIN B1 AFFECTED ESCHERICHIA COLI. (AUTHOR MODIFIED ABSTRACT).

MJ WATER-POLLUTION, AQUATIC-MICROBIOLOGY, PARAMECIUM, WATER-POLLUTION, ESCHERICHI-COLI, WATER-POLLUTION.

MN METALS, PESTICIDES, INSECTICIDES, RESIDUES, TOXICITY, BACTERIA, TRACE-ELEMENTS, PHOTOSENSITIVITY, MUTAGENS, CARCINOGENS, URANYL-COMPOUNDS, ELECTRON-MICROSCOPY, INVERTEBRATES, NAPHTHOQUINONES, NAPHTHALENE-COMPOUNDS, CHLORINE-AROMATIC-COMPOUNDS.

ID WATER-POLLUTION-EFFECTS-ANIMALS, WATER-POLLUTION-EFFECTS-PLANTS, PESTICIDE-RESIDUES, PARAMECIUM-CAUDATUM, AFLATOXINS, NAPHTHYLAMINES, SPIRO-BENZOFURAN-CYCLOHEXENE-DIONE-CHLORO-METHYL-TRIMETHOXY, BENZOPYRAN-CARBOXYLIC-ACID-DIHYDRO-HYDROXY-OXO-TRIMETHYL, DICHLONE, NAPHTHOQUINONE-2-3-DICHLORO-1-4, PHOTOTOXICITY, OWRR.

AN N PB-220 167/1.

<896>

AU NEFF, JERRY M. ANDERSON, JACK W.

IN DEP. BIOL. TEXAS A AND M UNIV. COLLEGE STATION. TEX.

YR 75.

TI ACCUMULATION, RELEASE, AND DISTRIBUTION OF BENZO(A)PYRENE-C14 IN THE CLAM RANGIA CUNEATA.

SO PROC. - CONF. PREV. CONTROL OIL POLLUT. P469-71. 1975.

LG EN.

DE BENZOPYRENE METAB CLAM. RANGIA BENZOPYRENE METAB. WATER POLLUTION BENZOPYRENE CLAM.

AN C 08511073215.

<897>

AU NELSON, K H. LYSYJ, I.
IN BURLINGTON INDUSTRIES RESEARCH AND DEVELOPMENT CENTER, GREENSBORO, NC.
YR 71.
TI ANALYSIS OF WATER FOR MOLECULAR HYDROGEN CYANIDE.
SO WATER POLLUTION CONTROL FEDERATION. WASH. D.C. JOURNAL, 43(5): 799-805, MAY 1971.
LG XX.
AB NONE.
DE WASTEWATER, HYDROGEN CYANIDE, GAS CHROMATOGRAPHY, FISHES, CALIFORNIA .
AN P 7006934.

<898>

AU NIAUSSAT P M. TRICHET J. HEROS M. JUONG N T. EHRHARDT J P.
YR 75.
TI OCCURRENCE OF BENZO-3 4 PYRENE IN WATER AND SEDIMENTS OF BRINY PONDS OF SOME POLYNESIAN ATOLLS.
SO C R HEBD SEANCES ACAD SCI SER D SCI NAT. 281 (14). 1031-1034.
DE PHYTO PLANKTON BACTERIA WATER POLLUTION CARCINOGEN.
AN B 76059749.

<899>

AU NIAUSSAT, PIERRE. AUGER, CHRISTIAN.
IN CENTRE RECH. SERV. SANTE ARMEES. MUS. NAT. HIST. NAT. PARIS. FR.
YR 70.
TI DISTRIBUTION OF BENZO(A)PYRENE AND PERYLENE IN VARIOUS ORGANISMS OF THE CLIPPERTON LAGOON ECOSYSTEM.
SO C. R. ACAD. SCI. SER. D. 270. P2702-5. 1970.
LG FR.
DE BENZOPYRENE PERYLENE POLLUTANTS ECOSYSTEM. PERYLENE BENZOPYRENE POLLUTANTS ECOSYSTEM. POLLUTANTS ECOSYSTEM BENZOPYRENE PERYLENE. ECOSYSTEM POLLUTANTS BENZOPYRENE PERYLENE. HYDROCARBONS PLANKTON CRUSTACEA GRASSES. PLANKTON HYDROCARBONS. CRUSTACEA HYDROCARBONS. GRASSES HYDROCARBONS.
AN C 07315073102.

<900>

AU NIEMI, AA.
IN INST. OF MARINE RESEARCH, BIOLOGICAL DIV. BULEV. 9 A 7, SF- 00120 HELSINKI/HELSINGFORS 12, FIN.
YR 72.
TI EFFECTS OF TOXICANTS ON BRACKISH-WATER PHYTOPLANKTON ASSIMILATION.
SO FINSKA VETENSKAPS-SOCIETETEN, HELSINGFORS. COMMENTATIONES BIOLOGICAE, 55: 19 PP. 1972.
LG EN.
AB NONE.
ID PHENOL, COPPER SULFATE, ASSIMILATION MEASUREMENTS, POTASSIUM CYANIDE .
DE PHYTOTOXICANTS, COPPER COMPOUNDS, BRACKISH WATERS, PHYTOPLANKTON, FINLAND COAST, POTASSIUM COMPOUNDS, AROMATIC COMPOUNDS.
AN P 7401381.

<901>

AU NIGMATULLINA, A. A. CHERNYSHOVA, N. S.
IN USSR.
YR 70.
TI DETERMINATION OF MICROGRAM AMOUNTS OF PHENOL BY SORPTION ON ACTIVATED CARBON.
SO TR. NAUCH.-ISSLED. PROEKT. INST. OBOGASHCH. RUD. TSVET. METAL. 4. P321-4. 1970.
LG RS.
DE PHENOL DETN. ACTIVATED CARBON PHENOL DETN. CARBON ACTIVATED PHENOL DETN. SORPTION PHENOL DETN. WASTE WATER ANALYSIS PHENOL.
AN C 07612067970.

<902>

AU NIGMATULLINA, A. A. SHTREKKER, G. P. CHERNYSHOVA, N. S.
IN USSR.
YR 71.
TI DETERMINATION OF PHENOL IN INDUSTRIAL WASTE WATERS.
SO SB. TR. NAUCH-ISSLED. PROEKT. INST. OBOGASHCH. RUD TSVET. METAL. NO. 2. P109-13. 1971.
LG RS.
DE PHENOL DETN WATER. WATER ANALYSIS PHENOL.
AN C 07824151105.

<903>

AU NIKOLAEVA, T. A. PLETNIKOVA, I. P.
IN INST. OBSHCH. KOMMUNAL'N. GIG. IM. SYSINA. MOSCOW. USSR.
YR 75.
TI HYGIENIC ASSESSMENT OF THE EXISTING TECHNOLOGY OF DRINKING WATER TREATMENT AND CERTAIN MEANS FOR IMPROVING IT.
SO GIG. SANIT. P29-33. 1975.
LG RS.

DE DRINKING WATER PURIFN. POLLUTANT REMOVAL DRINKING WATER. METAL REMOVAL DRINKING WATER. DDT REMOVAL DRINKING WATER. PETROLEUM REMOVAL DRINKING WATER. PHENOL REMOVAL DRINKING WATER.
AN C 08404021938.

<904>

AU NIKOLAEVA, T. A. PLETNIKOVA, I. P. LOVTSEVICH, E. L.
IN USSR.
YR 74.
TI HYGIENIC EVALUATION OF THE EFFECTIVENESS OF EXISTING METHODS AND INSTALLATIONS FOR PURIFYING AND DECONTAMINATING DRINKING WATER BY REMOVING VIRUSES, BACTERIA, AND SOME TOXIC CHEMICAL SUBSTANCES.
SO GIG. ASPEKTY OKHR. OKRUZHAYUSHCHEI SREDY. 2. P77-9. 1974.
LG RS.
DE PETROLEUM REMOVAL WATER PURIFN. PHENOL REMOVAL WATER PURIFN. DDT REMOVAL WATER PURIFN. METAL REMOVAL WATER PURIFN. BACTERIA REMOVAL WATER PURIFN. VIRUS REMOVAL WATER PURIFN.
AN C 08522166412.

<905>

AU NOTA, GIORGIO. PALOMBARI, ROBERTO.
IN IST. CHIM. UNIV. NAPOLI. NAPLES. ITALY.
YR 73.
TI DETERMINATION OF CYANIDES AND THIOCYANATES IN WATER BY GAS CHROMATOGRAPHY.
SO J. CHROMATOGR. 84. P37-41. 1973.
LG EN.
DE CYANIDE GAS CHROMATOG WATER. THIOCYANATE GAS CHROMATOG WATER. CHROMATOG CYANIDE THIOCYANATE WATER.
AN C 07920118230.

<906>

AU NOVOTNY, J.
IN USTAV VYZK. VYUZITI PALIV. BECHOVICE. CZECH.
YR 72.
TI CHROMATOGRAPHIC DETERMINATION OF DIHYDRIC PHENOLS IN WASTE WATERS.
SO VOD. HOSPOD. B. 22. P96-100. 1972.
LG CZ.
DE PHENOL DETN WASTE WATER. GASIFICATION LIGNITE WASTE WATER. PHOTOMETRIC DETN DIHYDRIC PHENOL. PAPER CHROMATOG DIHYDRIC PHENOL.
AN C 07906034890.

<907>

AU NOVOTNY, JAROSLAV.
IN USTAV VYZK. PALIV. BECHOVICE. CZECH.
YR 70.
TI DETERMINATION OF PYRIDINE BASES, AROMATIC HYDROCARBONS, AND KETONES IN WASTE WATER BY THE DIRECT INJECTION METHOD OF GAS-CHROMATOGRAPHY.
SO CHEM. PRUM. 20. P575-9. 1970.
LG CZ.
DE PYRIDINE BASES DETN WASTE WATERS. AROM HYDROCARBONS DETN WASTE WATERS . HYDROCARBONS AROM DETN WASTE WATERS. KETONES DETN WASTE WATERS.
AN C 07416079301.

<908>

AU NOVOTNY, JAROSLAV. DRAHORAD, JOSEF.
YR 70.
TI SEPARATION OF TARS FROM PHENOL WATERS OF HIGH-PRESSURE GAS AT TEMPERATURES SLIGHTLY ABOVE DEW POINT.
SO SB. PR. UVP (USTAV VYZK. VYUZITI PALIV). 21. P3-65. 1970.
LG CZ.
DE TAR SEPN PHENOLIC WASTE WATER. PHENOLIC WASTE WATER TAR SEPN.
AN C 07318091046.

<909>

AU NOZAKA, JUNICHIRO.
IN SCH. MED. OSAKA UNIV. OSAKA. JAPAN.
YR 71.
TI OXIDATION OF AROMATIC HYDROCARBONS BY (CELL-FREE ENZYME PREPARATIONS OF) MICROORGANISMS.
SO OSAKA DAIGAKU IGAKU ZASSHI. 23. P269-76. 1971.
LG JA.
DE AROM HYDROCARBON OXIDN PSEUDOMONAS. TOLUENE XYLENE OXIDN PSEUDOMONAS .
AN C 08003012263.

<910>

AU NUMAZAWA, RYOZO. WATANABE, KAZUHO. FUKIMBARA, TAKASHI.
IN MITSUBISHI RAYON CO. LTD. TOKYO. JAPAN.
YR 74.
TI MICROBIAL DEGRADATION OF FORMALDEHYDE. I. ISOLATION AND IDENTIFICATION OF FORMALDEHYDE-OXIDIZING MICROORGANISMS.
SO HAKKO KOGAKU ZASSHI. 52. P799- 804. 1974.
LG JA.

DE FORMALDEHYDE DECOMPN MICROCOCCUS.
AN C 08209053972.

<911>

AU NUMAZAWA, RYOZO. WATANABE, KAZUHO. FUKIMBARA, TAKASHI.
IN MITSUBISHI RAYON CO. LTD. TOKYO. JAPAN.
YR 74.
TI MICROBIAL DEGRADATION OF FORMALDEHYDE. II. FORMALDEHYDE-OXIDIZING ENZYME FROM MICROCOCCUS FLAVUS.
SO HAKKO KOGAKU ZASSHI. 52. P805- 10. 1974.
LG JA.
DE MICROCOCCUS FORMALDEHYDE OXIDIZING ENZYME. ALDEHYDE OXIDASE MICROCOCCUS.
AN C 08209053235.

<912>

AU NUNOGAWA J N. BURBANK N C. YOUNG R H F.
YR 71.
TI THE RELATIVE TOXICITIES OF SELECTED CHEMICALS TO SEVERAL SPECIES OF TROPICAL FISH.
SO JENKINS, S.H. (ED.). ADVANCES IN WATER POLLUTION RESEARCH, VOLS. I + II. PROCEEDINGS OF THE 5TH INTERNATIONAL CONFERENCE INTERNATIONAL ASSOCIATION ON WATER POLLUTION RESEARCH SAN FRANCISCO, CALIF. U.S.A. JULY 27-31, 1970; HONOLULU, HAWAII, U.S.A. AUGUST 2-5, 1970. XVII+IRREG. P. (VOL. I). ILLUS. MAPS. XVI+IRREG. P. (VOL. II). ILLUS. MAPS. PERGAMON PRESS: OXFORD, ENGLAND; NEW YORK, N.Y. U.S.A. 1971. HA-14.1-HA-14.14.
DE GAMBUSIA-AFFINIS LEBISTES-RETICULATUS TILAPIA-MOSSAMBICA KUHLIA-SANDVICENSIS STOLEPHORUS-PURPUREUS WATER POLLUTANTS PHENOL DDT DIELDRIN LINDANE.
AN B 72093869.

<913>

IN OAK RIDGE NATIONAL LAB. TENN. ADMINISTRATION. 4832000.
YR 76. 134P.
TI COAL TECHNOLOGY PROGRAM. QUARTERLY PROGRESS REPORT FOR THE PERIOD ENDING MARCH 31, 1976.
PR PC A07/MF A01.
AB ORNL'S PROGRESS IN COAL RESEARCH PROGRAMS IS REPORTED: COAL GASIFICATION AND COAL LIQUEFACTION (HYDROCARBONIZATION, RESIDUE CARBONIZATION, SOLIDS REMOVAL FROM COAL LIQUIDS, PYROLYSIS, IN-SITU GASIFICATION, SYNTHOIL PROCESS, ANALYTICAL CHEMISTRY (OF BY-PRODUCTS, EFFLUENTS, ETC.), ENVIRONMENTAL EFFECTS (INCLUDING STUDY OF CARCINOGENS, MUTAGENS, ETC.), TRACE ELEMENTS, MATERIALS TECHNOLOGY, NONDESTRUCTIVE TESTING, CHEMICAL RESEARCH, AND POSSIBLE APPLICATIONS OF PROCESS HEAT REACTORS. (ERA CITATION 01: 022402).
MJ COAL, RESIDUES, COAL-LIQUIDS, SOLVENT-REFINED-COAL, AEROSOLS, IN-SITU-GASIFICATION, BY-PRODUCTS, COED- PROCESS, LIQUID-WASTES, OIL-SHALE- PROCESSING-PLANTS, SYNTHANE-PROCESS, COAL-PREPARATION, SYNTHOIL-PROCESS, BENZOPYRENE, CONDENSED-AROMATICS.
MN RESEARCH-PROGRAMS, CARBONIZATION, CHEMICAL- COMPOSITION, COAL-GASIFICATION, COAL-LIQUEFACTION, FUEL-FEEDING-SYSTEMS, HYDROGENATION, TESTING, ADDITIVES, AGGLOMERATION, SEPARATION-PROCESSES, GASEOUS-WASTES, PYROLYSIS, CARBOXYLIC-ACIDS, CHEMICAL-ANALYSIS, HEALTH-HAZARDS, ORGANIC-COMPOUNDS, PHENOLS, AMMONIA, FLUIDIZED-BED-COMBUSTION, WATER-CHEMISTRY, BIOLOGICAL-EFFECTS, CARCINOGENS, CHROMOSOMAL-ABERRATIONS.
ID ERDA-010000, ERDA-560300, ERDA-040402, REVIEWING, NTISERDA.
AN N ORNL-5159.

<914>

IN OAK RIDGE NATIONAL LAB. TENN. 4832000.
YR 76. 81P.
TI COAL TECHNOLOGY PROGRAM QUARTERLY PROGRESS REPORT FOR THE PERIOD ENDING DECEMBER 31, 1975.
PR PC$5.00/MF$3.00.
AB INSTALLATION OF THE BENCH-SCALE HYDROCARBONIZATION RESEARCH SYSTEM WAS COMPLETED AND INITIAL PRESSURIZATION WAS FOLLOWED BY HEAT UP, LEAK CHECKING, AND TESTING OF INSTRUMENTATION. SHAKEDOWN RUNS WERE COMPLETED USING 5 AND 20 LB OF PULVERIZED COAL AS FEED AND PYROLYZING THE COAL AT APPROX. 1050 EXP 0 F UNDER 5 ATM OF NITROGEN PRESSURE. SOME EXCELLENT RESULTS HAVE BEEN OBTAINED IN THE ADDITIVE

AGGLOMERATION STUDIES USING LIQUID ADDITIVES DESIGNED FOR THE PETROLEUM INDUSTRY. CHARACTERIZATION STUDIES OF SRC OILS CONTINUE USING A NUMBER OF METHODS. STUDIES HAVE CONTINUED ON SEVERAL ASPECTS OF THE PHYSICAL STRUCTURE OF COAL, THE SORPTION AND DESORPTION OF WATER VAPOR ON A COBALT--MOLYBDENUM CATALYST, AND THE CATALYTIC CHEMISTRY OF THE SAME CATALYST. SYNTHOIL AND COED PROCESS OIL SAMPLES HAVE BEEN CHEMICALLY FRACTIONATED FOR BIOLOGICAL AND CHEMICAL CHARACTERIZATION. DEVELOPMENT CONTINUES ON ACHIEVING CLEANER FRACTIONATION OF CHEMICAL CLASSES THAN HAS PREVIOUSLY BEEN AFFORDED BY MORE CONVENTIONAL SCHEMES. STUDIES HAVE BEGUN TO CHARACTERIZE AQUEOUS EFFLUENTS FROM THE SYNTHANE PROCESS AND IN-SITU SHALE OIL RETORTING. ENGINEERING EVALUATIONS OF SEVERAL PROCESSES ARE REPORTED. INVESTIGATION INTO THE FATE AND AVAILABILITY OF A MODEL PAH COMPOUND IN WATER HAS BEGUN. ACQUISITION OF LITERATURE ON THE BIOACCUMULATION AND TOXICITY OF TRACE ELEMENTS RELEASED IN AQUEOUS EFFLUENTS FROM COAL CONVERSION PROCESSES HAS BEEN COMPLETED. IN THE ENGINEERING EVALUATIONS OF NUCLEAR PROCESS HEAT FOR COAL CONVERSION, PRELIMINARY DESIGN OF A PLANT FOR STEAM GASIFYING COAL WITH VHTR HEAT HAS BEEN COMPLETED. (ERA CITATION 01: 012322).

MJ COAL, COAL-GASIFICATION, COAL-LIQUEFACTION, SOLVENT-REFINED-COAL, SYNTHANE-PROCESS, SYNTHOIL-PROCESS.

MN FEASIBILITY-STUDIES, HTGR-TYPE-REACTORS, ORNL, PROCESS-HEAT-REACTORS, RESEARCH-PROGRAMS, CARBONIZATION, CHEMICAL-COMPOSITION, FLOWSHEETS, HYDROGENATION, RESIDUES, ADDITIVES, AGE-DEPENDENCE, AGGLOMERATION, ASHES, CHEMICAL-ANALYSIS, EMISSION-SPECTROSCOPY, MIXTURES, OILS, PARTICLE-SIZE, SEDIMENTATION, SEPARATION-PROCESSES, SRC-PROCESS, SULFUR, TOLUENE, VAPOR-PRESSURE, VISCOSITY, ADSORPTION, CATALYSTS, COBALT-OXIDES, COED-PROCESS, ELECTRON-MICROSCOPY, HETEROCYCLIC-COMPOUNDS, MOLYBDENUM-OXIDES, NITROGEN, PETROLOGY, POROSITY, REMOVAL, SMALL-ANGLE-SCATTERING, SORPTIVE-PROPERTIES, SURFACE-PROPERTIES, THIOPHENE, X-RADIATION, CHEMICAL-EFFLUENTS, ANTHRACENE.

ID ERDA-010000, NTISERDA.

AN N ORNL-5120.

<915>

AU OGATA M. MIYAKE Y.

YR 70.

TI OFFENSIVE ODOR SUBSTANCE IN THE EVIL SMELLING FISH FROM THE SEA POLLUTED BY PETROLEUM AND PETROCHEMICAL INDUSTRIAL WASTE PART 1 IDENTIFICATION OF OFFENSIVE ODOR SUBSTANCE.

SO ACTA MED OKAYAMA. 24 (4). 471-481.

DE TOLUENE.

AN B 53051862.

<916>

AU OGATA, KOICHI. KAWAI, FUSAKO. FUKAYA, MASAHIRO. TANI, YOSHIKI.

IN DEP. AGRIC. CHEM. KYOTO UNIV. KYOTO. JAPAN.

YR 75.

TI MICROBIAL DEGRADATION OF SYNTHETIC POLYMERS. I. ISOLATION OF POLYETHYLENE GLYCOLS-ASSIMILABLE BACTERIA.

SO HAKKO KOGAKU ZASSHI. 53. P757- 61. 1975.

LG EN.

DE POLYETHYLENE GLYCOL DEGRDN BACTERIA.

AN C 08401002111.

<917>

AU OGATA, MASANA. MIYAKE, YOSHIO. KIRA, SHOHEI. MATSUNAGA, KAZUYOSHI . IMANAKA, MASAAKI.

IN MED. SCH. OKAYAMA UNIV. OKAYAMA. JAPAN.

YR 77.

TI TRANSFER TO FISH OF PETROLEUM PARAFFINS AND ORGANIC SULFUR COMPOUNDS .

SO WATER RES. 11. P333-8. 1977.

LG EN.

DE EEL PETROLEUM PARAFFIN SULFUR COMPD. FISH PETROLEUM PARAFFIN SULFUR COMPD. WATER POLLUTION PETROLEUM FISH.

AN C 08625184196.

<918>

AU OHMORI S. IKEDA M. OGATA M.

YR 75.

TI THE METABOLISM AND ACCUMULATION OF PETROLEUM COMPONENTS IN FISH THE SIDE CHAIN OXIDATION OF P NITRO TOLUENE AND P NITRO BENZYL ALCOHOL

IN LIVER HOMOGENATES OF THE RAT AND EEL.
SO PHYSIOL CHEM PHYS. 7 (5). (RECD 1976) 477-480.
DE TOLUENE.
AN B 61061232.

<919>
AU OHMORI T. IKAI T. MINODA Y. YAMADA K.
YR 73.
TI UTILIZATION OF POLY PHENYL AND POLY PHENYL RELATED COMPOUNDS BY MICROORGANISMS PART 1.
SO AGRIC BIOL CHEM. 37 (7). 1599- 1605.
DE BACTERIA FUNGI BI PHENYL BENZOYL BUTYRIC-ACID BENZOIC-ACID PRODUCTION DDT STRUCTURAL SIMILARITY ENVIRONMENTAL POLLUTION BIO DEGRADATION SOIL LEAVES RIVER WATER ENRICHMENT CULTURE JAPAN.
AN B 59031158.

<920>
AU OHTA Y. RIBBONS D W.
YR 76.
TI BACTERIAL METABOLISM OF RESORCINYLIC COMPOUNDS PURIFICATION AND PROPERTIES OF ORCINOL HYDROXYLASE AND RESORCINOL HYDROXYLASE FROM PSEUDOMONAS-PUTIDA ORC.
SO EUR J BIOCHEM. 61 (1). 259-269.
DE FLAVO PROTEINS FAD MOLECULAR WEIGHT NADPH OXYGEN SEROLOGY AMINO- ACID COMPOSITION REGULATION.
AN B 61068798.

<921>
AU OLIVE W E JR. COBB H D. ATHERTON R M.
YR 76.
TI BIOLOGICAL TREATMENT OF CRESYLIC-ACID LADEN WASTE WATER.
SO SHARPLEY, J. MILES AND ARTHUR M. KAPLAN (ED.). PROCEEDINGS OF THE THIRD INTERNATIONAL BIODEGRADATION SYMPOSIUM. KINGSTON, RHODE ISLAND, USA, AUGUST 17-23, 1975. XIV+1138P. ILLUS. APPLIED SCIENCE PUBLISHERS LTD: LONDON, ENGLAND. ISBN 0-85334-679-8. (RECD 1977) 381-388.
DE PSEUDOMONADS POLLUTION TEMPERATURE.
AN B 78019876.

<922>
AU OLIVIERI R. BACCHIN P. ROBERTIELLO A. ODDO N. DEGEN L. TONOLO A.
YR 76.
TI MICROBIAL DEGRADATION OF OIL SPILLS ENHANCED BY A SLOW RELEASE FERTILIZER.
SO APPL ENVIRON MICROBIOL. 31 (5). 629-634.
DE BACTERIA MICROORGANISMS SARIR CRUDE OIL PARAFFIN SUPPORTED FERTILIZER MAGNESIUM AMMONIUM PHOSPHATE.
AN B 62036795.

<923>
AU OMORI T. JIGAMI Y. MINODA Y.
YR 74.
TI MICROBIAL OXIDATION OF ALPHA METHYL STYRENE AND BETA METHYL STYRENE.
SO AGRIC BIOL CHEM. 38 (2). 409-415.
DE BACTERIA.
AN B 58056990.

<924>
AU OMORI T. YAMADA K.
YR 70.
TI STUDIES ON THE UTILIZATION OF HYDRO CARBONS BY MICROORGANISMS PART 17 METABOLISM OF P XYLENE AND RELATED COMPOUNDS.
SO AGR BIOL CHEM. 34 (5). 664-669.
DE PSEUDOMONAS-AERUGINOSA.
AN B 51125985.

<925>
AU OMORI T. YAMADA K.
YR 70.
TI STUDIES ON THE UTILIZATION OF HYDRO CARBONS BY MICROORGANISMS PART 16 DETECTION OF METABOLIC INTERMEDIATES OF XYLENE AND PSEUDO CUMENE.
SO AGR BIOL CHEM. 34 (5). 659-663.
DE PSEUDOMONAS-AERUGINOSA.
AN B 51125984.

<926>
AU OMORI T. YAMADA K.
YR 69.
TI STUDIES ON THE UTILIZATION OF HYDRO CARBONS BY MICROORGANISM XIII OXIDATION OF M XYLENE AND PSEUDO CUMENE BY PSEUDOMONAS-AERUGINOSA.
SO AGR BIOL CHEM. 33 (7). 979-985.
DE SOIL SAMPLES MONO-CYCLIC AROMATIC COMPOUNDS.
AN B 51021304.

<927>
AU OMORI, TOSHIO. JIGAMI, YOSHIFUMI.

MINODA, YASUJI.

IN FAC. AGRIC. UNIV. TOKYO. TOKYO. JAPAN.

YR 75.

TI ISOLATION, IDENTIFICATION, AND SUBSTRATE ASSIMILATION SPECIFICITY OF SOME AROMATIC HYDROCARBON UTILIZING BACTERIA.

SO AGRIC. BIOL. CHEM. 39. P1775-9. 1975.

LG EN.

DE AROM HYDROCARBON METAB BACTERIA. PSEUDOMONAS AROM HYDROCARBON METAB. ISOPROPYLBENZENE METAB BACTERIA. METHYLSTYRENE METAB BACTERIA. ISOBUTYLBENZENE METAB BACTERIA.

AN C 08323190206.

<928>

AU OSTERROHT C.

YR 74.

TI DEVELOPMENT OF A METHOD FOR THE EXTRACTION AND DETERMINATION OF NONPOLAR DISSOLVED ORGANIC SUBSTANCES IN SEA WATER.

SO J CHROMATOGR. 101 (2). (RECD 1975) 289-298.

DE DDT DDE LINDANE ALDRIN 2 CHLORO BI PHENYL PHENANTHRENE PRISTANE HEXA DECANE GAS CHROMATOGRAPHY POLLUTION.

AN B 59052090.

<929>

AU OTTINGER, R. S. BLUMENTHAL, J. L. DAL PORTO, D. F. GRUBER, G. I. SANTY, M. J.

IN TRW SYSTEMS GROUP, REDONDO BEACH, CALIF. 354 595.

YR 73. 316P.

TI RECOMMENDED METHODS OF REDUCTION, NEUTRALIZATION, RECOVERY, OR DISPOSAL OF HAZARDOUS WASTE. VOLUME X. INDUSTRIAL AND MUNICIPAL DISPOSAL CANDIDATE WASTE STREAM CONSTITUENT PROFILE REPORTS. ORGANIC COMPOUNDS.

NT FINAL REPT.

AV PAPER COPY ALSO AVAILABLE FROM NTIS $72.00/SET OF 16 REPORTS AS PB- 224 579-SET.

PR PC$7.00/MF$1.45.

AB THIS VOLUME CONTAINS SUMMARY INFORMATION AND EVALUATION OF WASTE MANAGEMENT METHODS IN THE FORM OF PROFILE REPORTS FOR ORGANIC COMPOUNDS. THESE PROFILE REPORTS WERE PREPARED FOR EITHER A PARTICULAR HAZARDOUS WASTE STREAM CONSTITUENT OR A GROUP OF RELATED CONSTITUENTS. EACH PROFILE REPORT CONTAINS A DISCUSSION OF THE WASTE STREAM CONSTITUENTS THEIR TOXICOLOGY AND OTHER ASSOCIATED HAZARDS, THE DEFINITION OF ADEQUATE MANAGEMENT FOR THE WASTE MATERIAL, AN EVALUATION OF THE CURRENT WASTE MANAGEMENT PRACTICES WITH REGARD TO THEIR ADEQUACY, AND RECOMMENDATION AS TO THE MOST APPROPRIATE PROCESSING METHODS AVAILABLE AND WHETHER THE WASTE MATERIAL SHOULD BE CONSIDERED AS A CANDIDATE FOR NATIONAL DISPOSAL, INDUSTRIAL DISPOSAL, OR MUNICIPAL DISPOSAL.

MJ WATER-DISPOSAL, ORGANIC- COMPOUNDS, POLLUTION, HAZARDOUS- MATERIALS, MATERIALS-HANDLING, ORGANIC-COMPOUNDS, ORGANIC-COMPOUNDS, HAZARDOUS-MATERIALS.

MN INDUSTRIAL-WASTE-TREATMENT, SOLID-WASTE-DISPOSAL, LIQUID-WASTE-DISPOSAL, ALDEHYDES, KETONES, ORGANIC-ACIDS, ESTERS, NITRILES, NITROGEN-ORGANIC-COMPOUNDS, ANILINES, ALIPHATIC-HYDROCARBONS, CARBOXYLIC-ACIDS, ALCOHOLS, GLYCOLS, AMINES, AROMATIC-HYDROCARBONS, PETROLEUM-INDUSTRY, RECYCLING, RECLAMATION, MANAGEMENT-PLANNING, PROFILES, TOXICOLOGY, DRUG-INDUSTRY, CHEMICAL-INDUSTRY, BENZYL-CHLORIDE, PHENOLS, THIOLS, CRESOLS, HORMONES, CARBON-DISULFIDE, BENZENESULFONIC-ACIDS.

ID NATIONAL-DISPOSAL-SITES, NERC.

AN N PB-224 589/2.

<930>

AU OTTINGER, R. S. BLUMENTHAL, J. L. DAL PORTO, D. F. GRUBER, G. I. SANTY, M. J.

IN TRW SYSTEMS GROUP, REDONDO BEACH, CALIF. 354 595.

YR 73. 79P.

TI RECOMMENDED METHODS OF REDUCTION, NEUTRALIZATION, RECOVERY, OR DISPOSAL OF HAZARDOUS WASTE. VOLUME VIII. NATIONAL DISPOSAL SITE CANDIDATE WASTE STREAM CONSTITUENT PROFILE REPORTS. MISCELLANEOUS INORGANIC AND ORGANIC COMPOUNDS.

NT FINAL REPT.

AV PAPER COPY ALSO AVAILABLE FROM NTIS $72.00/SET OF 16 REPORTS AS PB- 224 579-SET.

PR PC$3.75/MF$1.45.

AB THIS VOLUME CONTAINS SUMMARY INFORMATION AND EVALUATION OF WASTE MANAGEMENT METHODS IN THE FORM OF PROFILE REPORTS FOR MISCELLANEOUS

INORGANIC AND ORGANIC COMPOUNDS. THESE PROFILE REPORTS WERE PREPARED FOR EITHER A PARTICULAR HAZARDOUS WASTE STREAM CONSTITUENT OR A GROUP OF RELATED CONSTITUENTS. EACH PROFILE REPORT CONTAINS A DISCUSSION OF THE GENERAL CHARACTERISTICS OF THE WASTE STREAM CONSTITUENTS, THEIR TOXICOLOGY AND OTHER ASSOCIATED HAZARDS, THE DEFINITION OF ADEQUATE MANAGEMENT FOR THE WASTE MATERIAL, AN EVALUATION OF THE CURRENT WASTE MANAGEMENT PRACTICES WITH REGARD TO THEIR ADEQUACY, AND RECOMMENDATION AS TO THE MOST APPROPRIATE PROCESSING METHODS AVAILABLE AND WHETHER THE WASTE MATERIAL SHOULD BE CONSIDERED AS A CANDIDATE FOR NATIONAL DISPOSAL, INDUSTRIAL DISPOSAL, OR MUNICIPAL DISPOSAL.

MJ WASTE-DISPOSAL, HAZARDOUS-MATERIALS, POLLUTION, HAZARDOUS-MATERIALS, MATERIALS-HANDLING, HAZARDOUS-MATERIALS.

MN ANTIMONY-INORGANIC-COMPOUNDS, CYANIDES, ELECTROLYTES, FLUORINE, CHLORINE, METAL-CARBONYLS, NICKEL-ORGANIC-COMPOUNDS, PERCHLORIC-ACID, ACROLEINS, ORGANIC-SULFATES, CHLORINE-AROMATIC-COMPOUNDS, ORGANIC- SULFATES, PROFILES, TOXICOLOGY, LOCAL-GOVERNMENT, STATE-GOVERNMENT, NATIONAL-GOVERNMENT, REGULATIONS, INDUSTRIAL-WASTES, MANAGEMENT-PLANNING, CHROMIUM-INORGANIC-COMPOUNDS, ACTIVATED-CARBON, BIODETERIORATION, ION-EXCHANGING, INCINERATORS, INJECTION-WELLS.

ID NATIONAL-DISPOSAL-SITES, PHENOL-PENTACHLORO, DIMETHYL-SULFATE, NERC.

AN N PB-224 587/6.

<931>

AU OTTINGER, R. S. BLUMENTHAL, J. L. DAL PORTO, D. F. GRUBER, G. I. SANTY, M. J.

IN TRW SYSTEMS GROUP, REDONDO BEACH, CALIF. 354 595.

YR 73. 146P.

TI RECOMMENDED METHODS OF REDUCTION, NEUTRALIZATION, RECOVERY, OR DISPOSAL OF HAZARDOUS WASTE. VOLUME V. NATIONAL DISPOSAL SITE CANDIDATE WASTE STREAM CONSTITUENT PROFILE REPORTS. PESTICIDES AND CYANIDE COMPOUNDS.

NT FINAL REPT.

AV PAPER COPY ALSO AVAILABLE FROM NTIS $72.00/SET OF 16 REPORTS AS PB- 224 579-SET.

PR PC$4.50/MF$1.45.

AB THIS VOLUME CONTAINS SUMMARY INFORMATION AND EVALUATION OF WASTE MANAGEMENT METHODS IN THE FORM OF PROFILE REPORTS FOR PESTICIDES AND INORGANIC CYANIDES. THESE PROFILE REPORTS WERE PREPARED FOR EITHER A PARTICULAR HAZARDOUS WASTE STREAM CONSTITUENT OR A GROUP OF RELATED CONSTITUENTS. EACH PROFILE REPORT CONTAINS A DISCUSSION OF THE GENERAL CHARACTERISTICS OF THE WASTE STREAM CONSTITUENTS, THEIR TOXICOLOGY AND OTHER ASSOCIATED HAZARDS, THE DEFINITION OF ADEQUATE MANAGEMENT FOR THE WASTE MATERIAL, AN EVALUATION OF THE CURRENT WASTE MANAGEMENT PRACTICES WITH REGARD TO THEIR ADEQUACY, AND RECOMMENDATION AS TO THE MOST APPROPRIATE PROCESSING METHODS AVAILABLE AND WHETHER THE WASTE MATERIAL SHOULD BE CONSIDERED AS A CANDIDATE FOR NATIONAL DISPOSAL, INDUSTRIAL DISPOSAL, OR MUNICIPAL DISPOSAL.

MJ WASTE-DISPOSAL, HAZARDOUS-MATERIALS, POLLUTION, HAZARDOUS-MATERIALS, MATERIALS-HANDLING, HAZARDOUS-MATERIALS, PESTICIDES, HAZARDOUS-MATERIALS, CYANIDES, HAZARDOUS-MATERIALS.

MN PROFILES, SOLID-WASTE-DISPOSAL, LIQUID-WASTE-DISPOSAL, CHLORINE-ORGANIC-COMPOUNDS, TOXICOLOGY, MANAGEMENT-PLANNING, INDUSTRIAL-WASTE-TREATMENT, INCINERATORS, INJECTION-WELLS, SANITARY-LANDFILLS, PHYSICAL-PROPERTIES, DDT, ALDRIN, CHLORDANE, DIELDRIN, ENDRIN.

ID NATIONAL-DISPOSAL-SITES, PARATHION, HEPTACHLOR, NERC.

AN N PB-224 584/3.

<932>

AU OZEROV, A. I. ZHUBANIYAZOV, K. N. BAZHINA, N. A.

IN USSR.

YR 73.

TI AUTOMATION OF PURIFICATION OF CYANIDE-CONTAINING EFFLUENTS OF CONCENTRATION PLANTS.

SO TR. N.-I. I PROEKT. IN-T PO OBOGASHCH. RUD. TSVET. MET. KAZMEKHANOBR . P117-23. 1973.

LG RS.

DE CYANIDE REMOVAL WASTEWATER.

AN C 08326209213.

<933>
AU PAKHOMOVA, A. D. BERENDEEVA, V. L.
IN USSR.
YR 76.
TI QUANTITATIVE ANALYSIS FOR BENZENE AND PHENOL IN WASTE WATER BY GLC.
SO KHIM. TEKHNOL. (KIEV). P57. 1976.
LG RS.
DE BENZENE DETN WASTEWATER CHROMATOG. PHENOL DETN WASTEWATER CHROMATOG.
AN C 08502010001.

<934>
AU PAKHOMOVA, A. D. BERENDEEVA, V. L.
IN INST. KOLLOIDN. KHIM. KHIM. VODY. KIEV. USSR.
YR 74.
TI DETERMINATION OF PHENOL AND P-CHLOROPHENOL IMPURITIES IN WATER BY GAS-LIQUID CHROMATOGRAPHY.
SO UKR. KHIM. ZH. (RUSS. ED.). 40. P1211-12. 1974.
LG RS.
DE CHLOROPHENOL DETN AQ SOLN. PHENOL DETN AQ SOLN. GAS CHROMATOG CHLOROPHENOL PHENOL. WATER ANALYSIS CHLOROPHENOL PHENOL.
AN C 08206038269.

<935>
AU PAKHOMOVA, A. D. BERENDEEVA, V. L.
IN INST. KOLLOIDN. KHIM. KHIM. VODY. KIEV. USSR.
YR 74.
TI IDENTIFICATION OF STYRENE IN WASTE WATERS.
SO KHIM. TEKHNOL. (KIEV). P12-13. 1974.
LG RS.
DE STYRENE DETN WASTEWATER. CHROMATOG DETN STYRENE WASTEWATER.
AN C 08124158428.

<936>
AU PAKHOMOVA, A. D. BERENDEEVA, V. L. KALINICHENKO, L. A.
IN INST. KOLLOIDN. KHIM. KHIM. VODY. KIEV. USSR.
YR 77.
TI IDENTIFICATION OF STYRENE IN WASTE WATERS.
SO KHIM. TEKHNOL. (KIEV). P58. 1977.
LG RS.
DE STYRENE REMOVAL RUBBER MANUF WASTEWATER.
AN C 08720156582.

<937>
AU PANOVA, V. A. NIKOLAEVA, Z. V.
IN USSR.
YR 69.
TI SEPARATE GAS-LIQUID CHROMATOGRAPHIC DETERMINATION OF MONOHYDRIC PHENOLS IN WASTE WATERS.
SO OCHISTKA PROIZVOD. STOCHNYKH VOD. NO. 4. P184-90. 1969.
LG RS.
DE PHENOLS GAS LIQ CHROMATOG. GAS LIQ CHROMATOG PHENOLS. CHROMATOG PHENOLS WASTE WATERS.
AN C 07226136141.

<938>
AU PANTANI, F. LEGITTIMO, P. RACANELLI, E.
IN IST. CHIM. ANAL. UNIV. FIRENZE. FLORENCE. ITALY.
YR 74.
TI DETERMINATION OF CYANIDES WITH PARTICULAR REGARD TO WASTE WATER.
SO RASS. CHIM. 26. P3-7. 1974.
LG IT.
DE CYANIDE DETN WASTEWATER. WASTEWATER ANALYSIS CYANIDE.
AN C 08126175802.

<939>
AU PATTERSON, J. W. MINEAR, R. A.
IN ILLINOIS INST. FOR ENVIRONMENTAL QUALITY, CHICAGO.
YR 71. 271P*.
TI WASTEWATER TREATMENT TECHNOLOGY.
NT FINAL REPT.
PR PC$3.00/MF$0.95.
AB THE DOCUMENT IS A STATE-OF-THE- ART SURVEY OF INDUSTRIAL WASTE TREATMENT LITERATURE PERTAINING TO 22 MATERIALS FREQUENTLY FOUND IN INDUSTRIAL WASTES: ARSENIC, BARIUM, BORON, CADMIUM, HEXAVALENT AND TRIVALENT CHROMIUM, COPPER, CYANIDE, FLUORIDES, SOLUBLE AND TOTAL IRON, LEAD, MANGANESE, NICKEL, OILY WASTES, PH CONTROL, PHENOLS, SELENIUM, SILVER, TOTAL DISSOLVED SOLIDS, CHLORIDE, AND ZINC. INFORMATION ON EXISTING METHODS OF TREATMENT, LEVELS OF TREATMENT ATTAINABLE, AND ASSOCIATED COSTS IS PRESENTED. IDENTIFICATION OF THE IMPACT WHICH SPECIFIC TREATMENT PROCESSES MIGHT HAVE UPON EFFLUENT DISCHARGE LEVELS HAS BEEN ATTEMPTED. (AUTHOR).
MJ WATER-POLLUTION, INDUSTRIAL- WASTES, INDUSTRIAL-WASTE-TREATMENT, REVIEWS.

MN ARSENIC, BARIUM, BORON, CADMIUM, CHROMIUM, COPPER, CYANIDES, FLUORIDES, IRON, LEAD, MANGANESE, NICKEL, OILS, PH-CONTROL, PHENOLS, SELENIUM, SILVER, CHLORIDES, ZINC, COST-ESTIMATES.
ID WATER-POLLUTION-CONTROL, OIL-POLLUTION-REMOVAL, SOLO.
AN N PB-204 521.

<940>
AU PAVLENKO, S. M.
IN MOSK. NAUCH.-ISSLED. INST. GIG. IM. ERISMANA. MOSCOW. USSR.
YR 69.
TI SANITARY-TOXICOLOGICAL MATERIALS FOR THE HYGIENIC BASIS OF THE MAXIMUM PERMISSIBLE CONCENTRATION OF BENZENE IN RESERVOIR WATERS.
SO PROM. ZAGRYAZNENIYA VODOEMOV. NO. 9. P201-10. 1969.
LG RS.
DE BENZENE RESERVOIR WATERS. RESERVOIR WATERS BENZENE.
AN C 07204015638.

<941>
AU PAVLETIC, ZLATKO. MUNJKO, IGNAC. STILINOVIC, BOZIDAR. DZINGOV, ARISTOTEL.
IN INST. BOT. UNIV. ZAGREB. ZAGREB. YUGOSLAVIA.
YR 72.
TI SURVIVAL OF ACTINOMYCETES AT HIGHER PHENOL CONCENTRATIONS.
SO ACTA BOT. CROAT. 31. P123-7. 1972.
LG CR.
DE PHENOL BACTERIA SENSITIVITY. ACTINOMYCETE PHENOL.
AN C 07807038505.

<942>
AU PAWLACZYK-SZPILOWA M. MOSKAL M. WERETELNIK J.
YR 72.
TI THE USEFULNESS OF BIOLOGICAL TESTS FOR DETERMINING THE TOXICITY OF SOME CHEMICAL COMPOUNDS IN WATERS.
SO ACTA HYDROBIOL. 14 (2). 115-127.
DE PARAMECIUM-CAUDATUM COPPER SULFATE LEAD ACETATE PHENOL ARQUARD ARESIN ANILINE POTASSIUM PER MANGANATE.
AN B 60028810.

<943>
AU PAWLOWSKY U. HOWELL J A.
YR 73.
TI MIXED CULTURE BIO OXIDATION OF PHENOL PART 2 STEADY-STATE EXPERIMENTS IN CONTINUOUS CULTURE.
SO BIOTECHNOL BIOFNG. 15 (5). 897- 903.
DE MICROORGANISMS WASTE TREATMENT WALL GROWTH.
AN B 57051911.

<944>
AU PAWLOWSKY U. HOWELL J A.
YR 73.
TI MIXED CULTURE BIO OXIDATION OF PHENOL PART 1 DETERMINATION OF KINETIC PARAMETERS.
SO BIOTECHNOL BIOENG. 15 (5). 889- 896.
DE MICROORGANISMS WASTE TREATMENT ACTIVATED SLUDGE.
AN B 57051910.

<945>
AU PAWLOWSKY U. HOWELL J A. CHI C T.
YR 73.
TI MIXED CULTURE BIO OXIDATION OF PHENOL PART 3 EXISTENCE OF MULTIPLE STEADY-STATES IN CONTINUOUS CULTURE WITH WALL GROWTH.
SO BIOTECHNOL BIOENG. 15 (5). 905- 916.
DE MICROORGANISMS WASTE TREATMENT MULTIPLE STEADY-STATES INHIBITORY SUBSTRATE.
AN B 57051912.

<946>
AU PAWLOWSKY, URIVALD.
IN STATE UNIVERSITY OF NEW YORK AT BUFFALO (0656) PH.D. 1972, 245PP.
YR 72.
TI BIOLOGICAL OXIDATION OF PHENOL BY A MIXED CULTURE OF MICROORGANISMS.
SO DAI V33(08), SEC B, P3628.
DE ENGINEERING, CHEMICAL (0542).
AN D ADG73-05159.

<947>
AU PAYNE J F.
IN ENVIRONMENT CANADA, ST JOHN'S NEWFOUNDLAND, CANADA A1C 1A1.
YR 76.
TI FIELD EVALUATION OF BENZOPYRENE HYDROXYLASE INDUCTION AS A MONITOR FOR MARINE PETROLEUM POLLUTION.
SO SCIENCE. 191. 4230. P945-6. 5 MAR 7S.
LG EN.
MJ BENZOPYRENE-HYDROXYLASE: BI. WATER-POLLUTANTS: AN.
MN ANIMAL. PETROLEUM: AN.

AN M 76129800.

<948>
AU PAYNE, J F. PENROSE, W R.
IN CANADA DEPT. OF THE ENVIRONMENT, FISHERIES AND MARINE SERVICE, BIOLOGICAL STATION, WATER ST. E. ST. JOHN'S, NEWF. A1C 5X1, CAN.
YR 75.
TI INDUCTION OF ARYL HYDROCARBON (BENZO (A) PYRENE) HYDROXYLASE IN FISH BY PETROLEUM.
SO BULLETIN OF ENVIRONMENTAL CONTAMINATION AND TOXICOLOGY, 14(1): 112-116, JULY 1975.
LG EN.
AB NONE.
ID ARYL HYDROCARBON HYDROXYLASES, NEWFOUNDLAND, ST. JOHN.
DE CANADA, CONTAMINATION, FISH, HYDROCARBONS, LAKES, PETROLEUM, WATER POLLUTION.
AN P 7505657.

<949>
AU PEARSON, EDWARD F.
IN CF AND I STEEL CORP. PUEBLO, COLO. RESEARCH LAB. ADA, OKLA.
YR 74. 312P.
TI RESEARCH STUDY OF COAL PREPARATION PLANT AND BY-PRODUCT COKE PLANT EFFLUENTS.
NT FINAL REPT.
PR PC$9.75/MF$2.25.
AB SOURCE STREAM CHARACTERIZATIONS AND BENCH/PILOT TREATABILITY STUDIES WERE PERFORMED ON WASTE WATER FROM AN INTEGRATED COAL WASHERY/BY-PRODUCT COKING OPERATION AT AN IRON AND STEEL PLANT. MAJOR PARAMETERS OF INTEREST WERE PHENOLICS, CYANIDE, AMMONIA, AND SUSPENDED SOLIDS. THE FEASIBLE TREATMENT SCHEMES IDENTIFIED AMONG NINE PROCEDURES TESTED WERE: BIOLOGICAL ACTIVATED SLUDGE AND CARBON ADSORPTION (FOR PHENOLICS AND CYANIDE); STEAM STRIPPING/ACID ADSORPTION (FOR AMMONIA); AND NEUTRALIZATION/POLYELECTROLYTE ADDITION/CENTRIFUGATION (FOR COAL SUSPENSIONS). IN ADDITION, A NEW FULL-SCALE DESIGN FOR THE COAL PREPARATION PLANT WAS PRODUCED. PORTIONS OF THIS DOCUMENT ARE NOT FULLY LEGIBLE.
MJ WATER-POLLUTION-CONTROL, IRON-AND-STEEL-INDUSTRY, COKING, INDUSTRIAL-WASTE-TREATMENT, SOLID-WASTE-DISPOSAL, COAL-PREPARATION.
MN EFFLUENTS, PILOT-PLANTS, CAPITALIZED-COSTS, PHENOLS, CYANIDES, AMMONIA, DESIGN-CRITERIA, CLEANING, ACTIVATED-CARBON-TREATMENT, WATER-ANALYSIS, COST-ESTIMATES, CHEMICAL-REMOVAL-WATER-TREATMENT, ION-EXCHANGERS, COLUMNS-PROCESS-ENGINEERING, PROCESS-CHARTING, FILTRATION, ADSORPTION, ACTIVATED-SLUDGE-PROCESS, CENTRIFUGING.
ID BIOLOGICAL-INDUSTRIAL-WASTE-TREATMENT, WATER-POLLUTION-SAMPLING, NTISEPAORD.
AN N PB-252 950/1SL.

<950>
AU PEDERSEN M G. HERSHBERGER W K. JUCHAU M R.
YR 74.
TI METABOLISM OF 3,4-BENZPYRENE IN RAINBOW TROUT (SALMO GAIRDNERI).
SO BULL ENVIRON CONTAM TOXICOL. 12. 4. P481-6. OCT 74.
LG EN.
MJ BENZOPYRENES: ME.
MN ANIMAL. GILLS: EN. IN-VITRO. METHYLCHOLANTHRENE: PD. NITROGEN.
AN M 75055543.

<951>
AU PEDERSEN M G. HERSHBERGER W K. ZACHARIAH P K. JUCHAU M R.
YR 76.
TI HEPATIC BIO TRANSFORMATION OF ENVIRONMENTAL XENOBIOTICS IN 6 STRAINS OF RAINBOW TROUT SALMO-GAIRDNERI.
SO J FISH RES BOARD CAN. 33 (4). 666-675.
DE 3 METHYL CHOLANTHRENE METAB-DRUG ANILINE BENZO A PYRENE HYDROXYLATION P NITRO BENZOIC-ACID REDUCTION NITRO REDUCTASE ARYL HYDRO CARBON HYDROXYLASE ENZYME KINETICS SPECTRAL PROPERTIES GENE EXPRESSION.
AN B 62034749.

<952>
AU PELLERIN F. BAYLOCQ D.
YR 71.
TI POTENTIOMETRIC DETERMINATION OF THE ORGANIC BASES IN AQUEOUS CONCENTRATED SALINE ON PHENOL SOLUTIONS.
SO PROD PROBL PHARM. 26 (5). 359.
DE ABSTRACT QUININE QUINIDINE

PHOTOMETRY.
AN B 71070519.

<953>

AU PELLERIN F. BAYLOCQ-QUINAULT D.
YR 75.
TI TITRATION OF ORGANIC BASES IN AQUEOUS PHENOL AND CONCENTRATED SALINE SOLUTIONS.
SO ANN PHARM FR. 33 (10). (RECD 1976) 479-486.
DE ALKALOIDS ANESTHETICS PHENOTHIAZINES SPASMOLYTICS POTENTIOMETRY.
AN B 76069463.

<954>

AU PEPELYAEV, YU. V. TERESHCHENKO, A. P. FILIPPOVA, L. K.
IN USSR.
YR 68.
TI GAS-CHROMATOGRAPHIC DETERMINATION OF VOLATILE ORGANIC ACIDS IN AQUEOUS SOLUTIONS.
SO MATER. RAB. SOVESHCH. VOP. KRUGOVOROTA VESHCHESTV SAMKNUTOI SIST. OSN. ZHIZNEDEYATEL. NIZSHIKH ORGANIZMOV, 5TH. P37-9. 1968.
LG RS.
DE ORG ACIDS AQ GAS CHROMATOG. ACIDS ORG AQ GAS CHROMATOG. GAS CHROMATOG ORG ACIDS AQ. CHROMATOG GAS ORG ACIDS AQ GAS. ACETIC ACID AQ GAS CHROMATOG. BUTYRIC ACID AQ GAS CHROMATOG. VALERIC ACID AQ GAS CHROMATOG. ISOVALERIC ACID AQ GAS CHROMATOG.
AN C 07208038651.

<955>

AU PETERSEN, M. R.
IN BATTELLE PACIFIC NORTHWEST LABS. RICHLAND, WASH. AND DEVELOPMENT ADMINISTRATION. 9500022.
YR 75. 10P.
TI ORGANIC CONSTITUENTS IN PROCESS STREAMS OF A SOLVENT-REFINING COAL PLANT. PROGRESS REPORT.
PR PC$3.50/MF$3.00.
AB THE MOST IMPORTANT OBSERVATION IS THAT THE SAME MAJOR ORGANIC COMPONENTS ARE PRESENT IN ALL THE SAMPLES INVESTIGATED: PROCESS ''NAPHTHA'', PROCESS SOLVENT, EXTRACTS OF SOLVENT-REFINED COAL, MINERAL RESIDUE AND EFFLUENT WATER. HOWEVER, THE DISTRIBUTION OF THE ORGANIC COMPOUNDS CHANGES WITH THE TYPE OF SAMPLE. THE COMPOUNDS WHICH HAVE BEEN IDENTIFIED ARE NOT NECESSARILY THOSE EVENTUALLY ESCAPING INTO THE ENVIRONMENT. THIS INITIAL INVESTIGATION CONSISTED OF LOOKING AT THE PROCESS STREAMS TO DETERMINE POTENTIAL POLLUTANTS AND DEVELOP TECHNIQUES FOR ISOLATING THE ORGANIC CONSTITUENTS. THE NEXT STEP IS TO SAMPLE ACTUAL EFFLUENTS COMING FROM THE PLANT. THESE INCLUDE THE PROCESS WATER AFTER TREATMENT, THE GASEOUS EMISSIONS AND ANY PARTICULATES. P AND M IS AWARE OF THE POTENTIAL CARCINOGENIC NATURE OF THE VARIOUS PROCESS STREAMS AND HAVE TAKEN STEPS TO INSURE THAT PLANT PERSONNEL ARE PROTECTED AND THAT SOUND INDUSTRIAL HYGIENE PRACTICES ARE FOLLOWED. MANY OF THE COMPOUNDS WHICH HAVE BEEN IDENTIFIED ARE TOXIC, ESPECIALLY THE PHENOLS AND QUINOLINES. THE PLANT DESIGN CRITERIA SHOULD RESULT IN VERY LOW CONCENTRATIONS OF ORGANIC COMPOUNDS, MAINLY PHENOLS, IN THE LIQUID EFFLUENT AND OUR ANALYSIS OF EFFLUENT WATER FROM THE BIOLOGICAL DIGESTER WILL SHOW THE ACTUAL CONCENTRATIONS. WE HAVE IDENTIFIED ONLY ONE REPORTED CARCINOGENIC COMPOUND (DIBENZOTHIOPHENE) THUS FAR. HOWEVER, WE ARE DEVELOPING TECHNIQUES TO ANALYZE FOR OTHER MINOR CONSTITUENTS OF CONCERN INCLUDING BENZO (A) PYRENE, A KNOWN CARCINOGEN. THE ORGANIC COMPOUNDS IDENTIFIED IN THE SAMPLES FROM THE SOLVENT-REFINED COAL PLANT AT FORT LEWIS, WASHINGTON, ARE LISTED. (ERA CITATION 01: 015607).
MJ COAL-PREPARATION-PLANTS, ORGANIC-COMPOUNDS.
MN AROMATICS, CARCINOGENS, CHEMICAL-ANALYSIS, ENVIRONMENTAL-EFFECTS, GAS-CHROMATOGRAPHY, PHENOLS, PILOT-PLANTS, SOLVENT-REFINED-COAL, TOXICITY, WASTE-WATER.
ID ERDA-013000, ERDA-400102, ERDA-010900, NTISERDA.
AN N BNWL-B-470.

<956>

AU PFUDERER, PETER. JANZEN, SHERRY. RAINEY, W. T. JR.
IN BIOL. DIV. OAK RIDGE NATL. LAB. OAK RIDGE. TENN.
YR 75.
TI IDENTIFICATION OF PHTHALIC ACID ESTERS IN THE TISSUES OF CYPRINODONT FISH AND THEIR ACTIVITY AS HEART

RATE DEPRESSORS.
SO ENVIRON. RES. 9. P215-23. 1975.
LG EN.
DE PHTHALATE ESTER GOLDFISH HEART. OCTYL PHTHALATE FISH. BU BENZYL PHTHALATE FISH. LIVER FISH PHTHALATE ESTER.
AN C 08321173367.

<957>
AU PHILPOT, R M. BEND, J R. JAMES, M O.
IN NATIONAL INST. OF ENVIRONMENTAL HEALTH SCIENCES, P.O. BO 12233, RESEARCH TRIANGLE PARK, NC 27709.
YR 76.
TI METABOLISM OF BENZO(A)PYRENE AND OTHER XENOBIOTICS BY MICROSOMAL MIXED-FUNCTION OXIDASES IN MARINE SPECIES.
SO SOURCES, EFFECTS & SINKS OF HYDROCARBONS IN THE AQUATIC ENVIRONMENT. (N.P.): AMERICAN INSTITUTE OF BIOLOGICAL SCIENCES, (1976?). PP. 184-199.
LG EN.
AB NONE.
ID BENZO(A)PYRENE, MIXED-FUNCTION OXIDASE ACTIVITIES, SHEEPSHEAD, FLOUNDER, STINGRAY, SKATES, SHARKS.
DE DIGESTIVE SYSTEM, FISH, HYDROCARBONS, ENZYMES, WATER POLLUTION, MARINE ENVIRONMENTS, METABOLISM, MARINE ORGANISMS.
AN P 7703414.

<958>
AU PINCHUGOV, V. N. KHLEBNIKOV, O. P. ZHARKOVA, N. A.
IN KARAGAND. METALL. KOMB. KARAGANDA. USSR.
YR 76.
TI CHROMATOGRAPHIC DETERMINATION OF NAPHTHALENE CONTENT IN WASTE WATERS
SO KOKS KHIM. P44-6. 1976.
LG RS.
DE NAPHTHALENE DETN WASTEWATER CHROMATOG.
AN C 08706043751.

<959>
AU PIPER R G. SMITH C E.
YR 73.
TI FACTORS INFLUENCING FORMALIN TOXICITY IN TROUT.
SO PROG FISH-CULT. 35 (2). 78-81.
DE MONTANA SALMO-GAIRDNERI TREATMENT ECTO PARASITE CONTROL HATCHERIES.
AN B 56042290.

<960>
AU PLEKHANOV, S. E. CHERNYSHEV, V. I. BUDRIN, K. S. TIMOFEEVA, T. A.
IN USSR.
YR 73.
TI EFFECTS OF WASTE WATERS, PHENOL, AND COPPER SULFATE ON THE MOVEMENT VELOCITY OF CELL PROTOPLASM OF CHARACEAE ALGAE.
SO BIOFIZ. ASPEKTY ZAGRYAZNENIYA BIOSFERY. P117-18. 1973.
LG RS.
DE WASTE WATER CHARACEAE ALGAE. PHENOL CHARACEAE ALGAE. COPPER SULFATE CHARACEAE ALGAE. CHARACEAE ALGAE PROTOPLASM WATER POLLUTION.
AN C 08301001799.

<961>
AU PODZOROVA, E. A. PLOTNIKOVA, V. P. BYCHKOV, N. V. KASPEROVICH, A. I.
IN USSR.
YR 75.
TI RADIATION-CHEMICAL OXIDATION OF AQUEOUS PHENOL SOLUTIONS.
SO V SB. XI MENDELEEVSK. S'EZD PO OBSHCH. I PRIKL. KHIMII. REF. DOKL. I SOOBSHCH. P78. 1975.
LG RS.
DE RADIOLYTIC OXIDN PHENOL AQ SOLN.
AN C 08516114634.

<962>
AU POGLAZOVA M N. FEDOSEEVA G E. KHESINA AIA. MEISEL' M N. SHABAD L M.
YR 68.
TI OXIDATION OF BENZ (A) PYRENE BY MICROORGANISMS IN DEPENDENCE ON ITS CONCENTRATION IN THE MEDIUM.
TR OKISLENIE BENZ (A) PIRENA MIKROORGANIZMAMI V ZAVISIMOSTI OT EGO KONTSENTRATSII V SREDE.
SO DOKL AKAD NAUK SSSR. 179. 6. P1460-2. 21 APR 68.
LG RS.
MJ BENZOPYRENES: ME.
MN BACILLUS-MEGATERIUM.
AN M 70163852.

<963>
AU POGLAZOVA M N. KHESINA A Y. FEDOSEEVA G E. MEISEL M N. SHABAD A L M.

YR 72.
TI THE MICROBIAL DEGRADATION OF BENZ A PYRENE IN WASTE WATERS.
SO DOKL BIOL SCI (ENGL TRANSL DOKL AKAD NAUK SSSR SER BIOL). 204 (1- 6). (RECD 1973) 346-348.
DE MICRO FLORA BACTERIA HUMAN ENVIRONMENT CARCINOGEN.
AN B 73065800.

<964>
AU POGLAZOVA, M. N. FEDOSEEVA, G. E. KHESINA, A. YA. MEISEL, M. N. SHABAD, L. M.
IN INST. MIKROBIOL. MOSCOW. USSR.
YR 71.
TI BENZO(A)PYRENE METABOLISM BY MICROFLORA OF VARIOUSSOILS AND SEPARATE SPECIES OF MICROORGANISMS.
SO DOKL. AKAD. NAUK SSSR. 198. P1211-13 (MICROBIOL). 1971.
LG RS.
DE BENZOPYRENE METAB SOIL BACTERIA. BACILLUS BENZOPYRENE METAB. PSEUDOMONAS BENZOPYRENE METAB.
AN C 07513085617.

<965>
AU POGLAZOVA, M. N. MEISEL, M. N.
IN INST. MIKROBIOL. MOSCOW. USSR.
YR 71.
TI LOCALIZATION OF BENZ(A)PYRENE IN BACTERIAL CELLS.
SO MIKROBIOLOGIYA. 40. P1050-3. 1971.
LG RS.
DE BENZPYRENE ACCUMULATION BACTERIA. LIPOPROTEIN MEMBRANE BENZPYRENE ACCUMULATION. MESOSOME BENZPYRENE ACCUMULATION.
AN C 07619108593.

<966>
AU POHL R J. BEND J R. DEVEREUX T R. FOUTS J R.
YR 73.
TI HEPATIC CHEMICAL AND DRUG METABOLIZING ENZYMES IN COASTAL MAINE USA MARINE SPECIES.
SO BULL MT DESERT ISL BIOL LAB. 13. (RECD 1974) 94-98.
DE CANCER-BOREALIS HOMARUS- AMERICANUS MYXINE-GLUTINOSA SQUALUS- ACANTHIAS RAJA-ERINACEA RAJA- OCELLATA RAJA-RADIATA ANGUILLA- ROSTRATA FUNDULUS-HETEROCLITUS PSEUDOPLEURONECTES-AMERICANUS HEMITRIPTERUS-AMERICANUS SCOMBER-SCOMBRUS WATER POLLUTION ANILINE HYDROXYLASE D BENZPHETAMINE DEMETHYLASE BENZ PYRENE HYDROXYLASE N N DI METHYL ANILINE BENZ PYRENE 7 ETHOXY COUMARIN.
AN B 75021298.

<967>
AU POHL R J. JAMES M O. FOUTS J R. BEND J R.
YR 76.
TI XENOBIOTIC METABOLISM IN MARINE FISH TREATED WITH 2 3 7 8 TETRA CHLORO DI BENZO-P-DIOXIN 3 METHYL CHOLANTHRENE OR 1 2 3 4 DI BENZ ANTHRACENE.
SO PHARMACOLOGIST. 18 (2). 207.
DE ABSTRACT RAJA-ERINACEA PSEUDOPLEURONECTES-AMERICANUS ARCHASARGUS-PROBATOCEPHALUS CARCINOGENS HEPATIC MICROSOMAL BENZO A PYRENE HYDROXYLASE BENZPHETAMINE N DEMETHYLASE ANILINE HYDROXYLASE 7 ETHOXY COUMARIN O DEETHYLASE EPOXIDE HYDRASE GLUTATHIONE S TRANSFERASE CYTOCHROME P-450.
AN B 77000734.

<968>
AU POHLAND, F. G. GHOSH, S.
IN SCH. CIV. ENG. GEORGIA INST. TECHNOL. ATLANTA. GA.
YR 71.
TI ANAEROBIC STABILIZATION OF ORGANIC WASTES. TWO-PHASE CONCEPT.
SO ENVIRON. LETT. 1. P255-66. 1971.
LG EN.
DE ORG WASTE ANAEROBIC STABILIZATION. ACID BACTERIA ANAEROBIC STABILIZATION. METHANE BACTERIA ANAEROBIC STABILIZATION. DIGESTION ANAEROBIC ORGS REACTORS.
AN C 07524143792.

<969>
AU POLISSOIS G. TESSIER A. CAMPBELL P.
YR 72.
TI INFLUENCE OF PHENOLS SUPPLIED BY REFINERIES OF THE MONTREAL REGION ON THE QUALITY OF ST-LAWRENCE RIVER WATER.
SO ACFAS (ASSOC CAN FR AV SCI). 39. (RECD 1973) 143.
DE ABSTRACT CANADA POLLUTION WASTES.
AN B 74041945.

<970>
AU POLMANE, G. TRUSOV, S. R.

NEILANDS, O.
IN RIZH. POLITEKH. INST. RIGA. USSR.
YR 77.
TI EFFECT OF WATER ON THE LIQUID- PHASE CATALYTIC OXIDATION OF O- XYLENE.
SO LATV. PSR ZINAT. AKAD. VESTIS, KIM. SER. P420-3. 1977.
LG RS.
DE XYLENE OXIDN WATER EFFECT.
AN C 08721167629.

<971>
AU PONOMAREV, YU. P. ANUFRIEVA, T. L. SHKORBATOVA, T. L.
IN KHAR'K. OTD. VSES. NAUCHNO- ISSLED. INST. "VODGEO". KHARKOV. USSR.
YR 74.
TI POLAROGRAPHIC DETERMINATION OF ACRYLONITRILE IN WASTE WATERS USING EXTRACTION.
SO VODOSNABZH. KANALIZ. GIDROTEKH. SOORUZH. 17. P67-70. 1974.
LG RS.
DE ACRYLONITRILE DETN WASTEWATER POLAROG.
AN C 08206034803.

<972>
AU PONOMAREV, YU. P. MESHKOVA, O. V. RYZHOVA, L. I. DMITRIEVA, V. N.
IN USSR.
YR 74.
TI DETERMINATION OF STYRENE AND METHYL METHACRYLATE IN WASTE WATER BY POLAROGRAPHY WITH THE USE OF EXTRACTION.
SO FIZ.-KHIM. METODY OCHISTKI ANAL. STOCHNYKH VOD PROM. PREDPR. P99-104. 1974.
LG RS.
AV SHKORBATOVA, T. L.
DE METHYL METHACRYLATE DETN WASTEWATER. STYRENE DETN WASTEWATER. POLAROG METHYL METHACRYLATE STYRENE.
AN C 08604021536.

<973>
AU POP, VICTOR I. IONESCU-HOMORICEANU, SERBAN I.
IN ROM.
YR 75.
TI THE BIOLOGICAL TREATMENT OF WASTE WATERS IN OIL REFINERIES. IV. DEGRADATION OF THE PHENOLIC COMPOUNDS AND MERCAPTANS.
SO REV. CHIM. (BUCHAREST). 26. P56- 8. 1975.
LG RO.
DE OIL REFINERY WASTEWATER ACTIVATED SLUDGE. PHENOL DEGRDN OIL REFINERY WASTEWATER. MERCAPTAN DEGRDN OIL REFINERY WASTEWATER.
AN C 08318151780.

<974>
AU PORTMANN, J. E.
IN FISH. LAB. MINIST. AGRIC. FISH. FOOD. BURNHAM-ON-CROUCH. ENGL.
YR 75.
TI PERSISTENT ORGANIC RESIDUES.
SO DISCHARGE SEWAGE SEA OUTFALLS, PROC. INT. SYMP. P123-30. 1975.
LG EN.
AV GAMESON, A. L. H.
DE REVIEW ORG RESIDUES WASTEWATER. CHLORO ORG WASTEWATER REVIEW. PHENOL WASTEWATER REVIEW. PESTICIDE RESIDUE WASTEWATER REVIEW. DETERGENT RESIDUE WASTEWATER REVIEW. POLLUTION ENVIRONMENT WASTEWATER REVIEW. WATER NATURAL POLLUTION REVIEW. SAFETY ORG RESIDUE WASTEWATER REVIEW .
AN C 08418126299.

<975>
AU POVERENNYI, A. M. SEMIN, YU. A. SAENKO, A. S. SYNZYNYS, B. I.
IN INST. MED. RADIOL. ACAD. MED. SCI. OBNINSK. USSR.
YR 75.
TI POSSIBLE MECHANISMS OF LETHAL AND MUTAGENIC ACTION OF FORMALDEHYDE.
SO MUTAT. RES. 27. P123-6. 1975.
LG EN.
DE FORMALDEHYDE GLYCINE DNA LESIONS. MUTATION FORMALDEHYDE BACTERIA MECHANISM.
AN C 08217106897.

<976>
AU PRAKASAM T B. DONDERO N C.
YR 70.
TI AEROBIC HETEROTROPHIC BACTERIAL POPULATIONS OF SEWAGE AND ACTIVATED SLUDGE. V. ANALYSIS OF POPULATION STRUCTURE AND ACTIVITY.
SO APPL MICROBIOL. 19. 4. P671-80. APR 70.
LG EN.
MJ BACTERIA: CL.
MN ADAPTATION-PHYSIOLOGICAL. BACTERIA: GD, ME. MANDELIC-ACIDS: ME. PHENYLACETATES: ME.
AN M 70201783.

<977>
AU PRICE, PHILIP. MARTINSEN, D. P. UPHAM, R. A. SWOFFORD, H. S. JR. BUTTRILL, S. E. JR.
IN DEP. CHEM. UNIV. MINNESOTA. MINNEAPOLIS. MINN.
YR 75.
TI CHEMICAL IONIZATION MASS SPECTROMETRIC DETERMINATION OF ORGANIC COMPOUNDS IN SOLUTION AT THE PART PER MILLION LEVEL.
SO ANAL. CHEM. 47. P190-1. 1975.
LG EN.
DE CHEM IONIZATION MASS SPECTROMETRY. TRACE ORG ANALYSIS SOLN. ETHYL ETHER DETN SOLN. VALERONITRILE DETN SOLN. ANILINE DETN SOLN. ACETONE DETN SOLN. WATER REAGENT GAS CHEM IONIZATION.
AN C 08210067908.

<978>
AU PRISTAVU, N.
IN DEP. PLANT PHYSIOL. INST. BIOL. SCI. BUCHAREST. ROM.
YR 75.
TI ACTION OF P-BENZOQUINONE ON THE RADIOACTIVE CARBON METABOLISM IN CHLORELLA PYRENOIDOSA.
SO PROC. INT. CONGR. PHOTOSYNTH. 3RD. 2. P1541-6. 1975.
LG EN.
AV AVRON, MCRDHAY.
DE BENZOQUINONE CARBON METAB CHLORELLA. ALGAE CARBON METAB BENZOQUINONE . PHOTOSYNTHESIS CHLORELLA BENZOQUINONE.
AN C 08403013015.

<979>
AU PRIVALOV, V. E. LAZORIN, S. N. KORNIENKO, V. M.
IN FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OHIO. 141600.
YR 72. 19P.
TI THE CONTEMPORARY STATE OF DECONTAMINATING WASTE WATER.
NT EDITED MACHINE TRANS. OF KOKS I KHIMIYA (USSR) N5 P33-38 1969, BY CHARLES T. OSTERTAG, JR.
PR PC$3.00/MF$0.95.
AB A REVIEW IS MADE OF WATER POLLUTION FROM THE COKE-CHEMICAL INDUSTRY IN THE USSR. THIS IS BASED ON A STUDY BY THE WORLD HEALTH ORGANIZATION. A DISCUSSION IS PRESENTED ON THE PURIFICATION OF CONCENTRATED PHENOL WASTE WATERS USING ACTIVATED SILT. PERFORMANCE DATA ARE PRESENTED FOR PILOT PLANT RESULTS. IT IS STATED THAT WASTE WATERS CAN BE PURIFIED OF PHENOLS AND THIOCYAMATES IN ONE STAGE.
MJ WATER-POLLUTION WASTES- INDUSTRIAL, PHENOLS, WATER- POLLUTION, THIOCYANATES, WATER- POLLUTION.
MN CHEMICAL-INDUSTRY, CONTROL, USSR, PILOT-PLANTS, MICROORGANISMS, PH.
ID COKE-INDUSTRY, WATER-POLLUTION-CONTROL, INDUSTRIAL-WASTE-TREATMENT, BIOLOGICAL-INDUSTRIAL-WASTE-TREATMENT, ACTIVATED-SLUDGE-PROCESS, TRANSLATIONS.
AN N AD-747 514.

<980>
AU PROKOP'EVA, M. F. SILKINA, T. V.
IN TASHK. OTD. VSES. NAUCHNO- ISSLED. INST. "VODGEO". TASHKENT. USSR.
YR 75.
TI GAS CHROMATOGRAPHIC DETERMINATION OF FURAN COMPOUNDS IN WASTE WATERS .
SO GIDROLIZ. LESOKHIM. PROM-ST. P17-19. 1975.
LG RS.
DE FURAN DERIV DETN WASTEWATER.
AN C 08312102810.

<981>
AU PROSKURYAKOV, V. A. CHISTYAKOV, A. N.
IN USSR.
YR 71.
TI OXIDATION OF QUINONES WITH AIR IN AQUEOUS ALKALINE MEDIUM.
SO OKISLENIE UGLEVODORODOV PROIZVOD. BITUMOV. NO. 9. P24-32. 1971.
LG RS.
DE QUINONE CONDENSED OXIDN. ANTHRAQUINONE OXIDN. FLUORENONE OXIDN. PHENANTHRENEQUINONE OXIDN. PYRENEQUINONE OXIDN. FLUORANTHENEQUINONE OXIDN. ACENAPHTHENEQUINONE OXIDN.
AN C 07901005154.

<982>
AU PRUDEN B B. FERQUSON D R.
YR 73.
TI REMOVAL OF PHENOL IN WASTE WATER BY WET AIR OXIDATION.
SO WATER POLLUT RES CAN. 8. (RECD 1974) 148-167.
DE INCOMPLETE COMBUSTION TAR FORMATION UNMIXED REACTOR.
AN B 75066458.

<983>

AU PRUDEN, B. B. LE, H.
IN DEP. CHEM. ENG. UNIV. OTTAWA. OTTAWA. ONT.
YR 76.
TI WET AIR OXIDATION OF SOLUBLE COMPONENTS IN WASTE WATER.
SO CAN. J. CHEM. ENG. 54. P319-25. 1976.
LG EN.
DE WASTEWATER WET AIR OXIDN. PHENOL WET AIR OXIDN. NITRILOTRIACETIC ACID WET AIR OXIDN.
AN C 08526197648.

<984>

AU PURRE, T. RAUDSEPP, H. SHMAGIN, YA. G. METSIK, L.
IN USSR.
YR 75.
TI SYSTEM FOR EXTRACTION OF WATER-SOLUBLE PHENOLS FROM DISTILLATES OF COKING OF HIGH SHALE TAR FRACTIONS.
SO TR. NIISLANTSEV. P160-71. 1975.
LG RS.
DE SHALE OIL COKING DISTILLATE. PHENOL EXTN COKING DISTILLATE.
AN C 08418124238.

<985>

AU PUSEY, PETER.
IN UNIV. OF PITTSBURGH. PITTSBURGH. PA.
YR 69.
TI STUDY OF THE RATE OF DECAY OF CONCENTRATION FLUCTUATIONS IN THE CRITICAL REGION OF A PHENOL-WATER MIXTURE, USING A PHOTON CORRELATION METHOD.
PG 109 PP.
LG EN.
AV 70-4270.
DE PHOTON CORRELATION SPECTROMETER. SPECTROMETER PHOTON CORRELATION. PHENOL WATER MIXT CONCN FLUCTUATIONS.
AN C 07402007174.

<986>

AU PUST, H. W. DOWNS, S. F.
IN TELEDYNE ANAL. INSTRUM. SAN GABRIEL. CALIF.
YR 75.
TI CONTINUOUS ANALYSIS OF PHENOL IN WASTE WATER BY ULTRAVIOLET SPECTROPHOTOMETRY.
SO ANAL. INSTRUM. 13. P77-81. 1975.
LG EN.
DE UV MONITORING PHENOL WASTEWATER.
AN C 08426184518.

<987>

AU PUZIKOVA N B. MARKIN V N.
YR 75.
TI EFFECT OF ANILINE AND ANILINE HYDRO CHLORIDE ON THE LARVAE OF CHIRONOMUS-DORSALIS.
SO TR SARAT OTD GOS NAUCHNO-ISSLED INST OZERN RECHN RYBN KHOZ. 13. 104- 109 (FROM REF ZH BIOL, 1976, 1U457).
DE ABSTRACT PERMISSIBLE CONCENTRATIONS.
AN B 76066199.

<988>

AU RADAEVA, L. A. KVYATKOVSKII, A. N. KUDINOV, B. V.
IN USSR.
YR 72.
TI RECOVERY OF CYANIDE FROM CYANIDE-CONTAINING WASTES OF BENEFICIATION PLANTS WITH BY-PRODUCT EXTRACTION OF NOBLE AND NONFERROUS METALS AND RETURN OF THE PURIFIED WATER TO CIRCULATION.
SO TR. NAUCHNO-ISSLED. PROEKTN. INST. OBOGASHCH. RUD TSVETN. MET. NO. 9, . P43-6. 1972.
LG RS.
DE WASTEWATER CYANIDE RECOVERY RECYCLING.
AN C 08126175715.

<989>

AU RAEF S F. CHARACKLIS W G. KESSICK M A. WARD C H.
IN S.I.P. ENG. HOUSTON, TEX. USA.
YR 77.
TI FATE OF CYANIDE AND RELATED COMPOUNDS IN AEROBIC MICROBIAL SYSTEMS PART 2 MICROBIAL DEGRADATION.
SO WATER RES. 11 (6). 485-492.
LG EN.
DE BACILLUS-MEGATERIUM.
AN B 65033167.

<990>

AU RALSTON J R. VELA G R.
YR 74.
TI A MEDIUM FOR DETECTING PHENOL DEGRADING BACTERIA.
SO J APPL BACTERIOL. 37 (3). 347-351.
AN B 59031153.

<991>

AU RALSTON J R. VELA G R.
YR 74.
TI STIMULATION OF PHENOL DEGRADATION BY FACTORS IN INDUSTRIAL WASTE WATER.
SO TEX REP BIOL MED. 32 (2). 615-616.
DE ABSTRACT BIO DEGRADATION MINERAL SALT MEDIUM AMINO-ACIDS TEMPERATURE.
AN B 75024718.

<992>

AU RAO B V. BHAT J V.
YR 72.
TI STABILIZATION OF WASTE WATER CONTAINING PHENOLS WITH YEAST-ENRICHED ACTIVATED SLUDGE.
SO BIOCHEM J. 126. 1. P38P. JUN 72.
LG EN.
MJ MONILIALES.
MN CANDIDA.
AN M 73040201.

<993>

AU RAO. A. V. ISWARAN. V.
IN DIV. MICROBIOL. INDIAN AGRIC. RES. INST. NEW DELHI. INDIA.
YR 73.
TI EFFECT OF PHENOLIC COMPOUNDS ON THE GROWTH OF RHIZOBIA.
SO ZENTRALBL. BAKTERIOL. PARASITENK. INFEKTIONSKR. HYG. ABT. 2. 128. P753-7. 1973.
LG EN.
DE COUMARATE RHIZOBIUM GROWTH INHIBITION. CINNAMATE RHIZOBIUM GROWTH INHIBITION. VANILLATE RHIZOBIUM GROWTH INHIBITION. CATECHOL RHIZOBIUM GROWTH INHIBITION.
AN C 08105021624.

<994>

AU RAYMOND. DEBORAH D.
IN RUTGERS STATE UNIV. NEW BRUNSWICK. N. J.
YR 74.
TI METABOLISM OF METHYLNAPHTHALENES AND OTHER RELATED AROMATIC HYDROCARBONS BY MARINE BACTERIA.
PG 135 PP.
LG EN.
AV XEROX UNIV. MICROFILMS, ANN ARBOR, MICH. ORDER NO. 75-8431.
DE METHYLNAPHTHALENE METAB MARINE BACTERIA. NAPHTHALENE METAB MARINE BACTERIA. HYDROCARBON METAB MARINE BACTERIA.
AN C 08305039988.

<995>

AU REHM. HANS J.
IN INST. LEBENSMITTELCHEM. TECH. HOCHSCH. MUENCHEN. MUNICH. GER.
YR 69.
TI INHIBITING ACTION OF SODIUM O-PHENYLPHENATE (SOPP) AND BIPHENYL ON SPECIFIC REACTIONS OF THE METABOLISM OF MICROORGANISMS.
SO PROC. INT. CITRUS SYMP. 1ST. 3. P1325-31. 1969.
LG EN.
AV CHAPMAN. HOMER D.
DE PHENYLPHENATE FUNGI METAB. GLYCOLYSIS FUNGI PHENYLPHENATE. CITRIC ACID FUNGI PHENYLPHENATE. BIPHENYL FUNGI ADENOSINE TRANSAMINASE.
AN C 07405020719.

<996>

AU REICHENBACH-KLINKE H-H.
YR 69.
TI INVESTIGATIONS ON ENZYMES IN FISH PART 1 ENZYME ACTIVITY IN DEPENDENCE OF PH TEMPERATURE AND WATER COMPOSITION.
SO ARCH FISCHEREIWISS. 20 (2-3). 169-177.
DE SALMO-GAIRDNERI COREGONUS- LAVARETUS STOMACH HEMORRHAGIC SEPTICEMIA TRYPSIN CHYMOTRYPSIN ALPHA AMYLASE DETERGENT PHENOL POLLUTION CUPRAVIT.
AN B 52118580.

<997>

AU REICHERT J K.
YR 68.
TI CARCINOGENS IN WATER AND SOIL. XXIV. THE ELIMINATION OF POLYCYCLIC AROMATIC COMPOUNDS IN THE PREPARATION OF DRINKING WATER WITH C102: IDENTIFICATION OF HITHERTO UNKNOWN DERIVATES OF BENZOPYRENE AND C1022 .
TR KANZEROGENE SUBSTANZEN IN WASSER UND BODEN. XXIV. DIE ENTFERNUNG POLYZYKLISCHER AROMATEN BEI DER TRINKWASSERAUFBEREITUNG DURCH C102: IDENTIFIZIERUNG BISHER UNBEKANNTER BENZPYREN-C102-FOLGEPRODUKTE.
SO ARCH HYG BAKTERIOL. 152. 3. P277- 9. JUN 68.
LG GE.
MJ BENZOPYRENES: AN.
MN CHEMISTRY.
AN M 69118478.

<998>

AU REID, GEORGE W. STREEBIN, LEALE E.
IN OKLAHOMA UNIV. NORMAN. SCHOOL OF CIVIL ENGINEERING AND ENVIRONMENTAL SCIENCE.
YR 72. 209P*.
TI EVALUATION OF WASTE WATERS FROM PETROLEUM AND COAL PROCESSING.
NT ENVIRONMENTAL PROTECTION TECHNOLOGY SERIES.
AV 72-001.
PR PC$5.25/MF$0.95.
AB THE REPORT PRESENTS AN EVALUATION ON POLLUTION PROBLEMS, ABATEMENT PROCEDURES AND CONTROL TECHNIQUES RELEVANT TO THE PETROLEUM AND COAL INDUSTRIES. PETROLEUM WASTES ARE DISCUSSED UNDER THREE BROAD SECTIONS: DRILLING-PRODUCTION, TRANSPORTATION AND STORAGE, AND REFINING. WITHIN EACH SECTION, PETROLEUM WASTES ARE IDENTIFIED AS TO THEIR SOURCE, VOLUME, AND COMPOSITION, AND WASTE TREATMENT METHODS ARE DISCUSSED. THE RESULTS OF A FIELD STUDY OF THREE SMALL REFINERIES ARE ALSO REPORTED. COAL MINING, COAL PROCESSING, AND COAL UTILIZATION, THE WASTES ASSOCIATED WITH EACH, AND THE CORRESPONDING CONTROL MEASURES ARE PRESENTED. ACID MINE DRAINAGE, THE MOST SIGNIFICANT POLLUTION PROBLEM FROM COAL MINING, AND POSSIBLE CONTROL MEASURES ARE DISCUSSED. THE MAJOR POLLUTION PROBLEMS ASSOCIATED WITH COAL PROCESSING ORIGINATE FROM COAL CLEANING, THE COKING PROCESS, AND REFUSE DISPOSAL. THE PRODUCTION OF COKE BY CARBONIZATION OF COAL AND ITS POLLUTANTS ARE REVIEWED.
MJ PETROLEUM-INDUSTRY, WATER-POLLUTION, COAL-PREPARATION, WATER-POLLUTION, WATER-POLLUTION, INDUSTRIAL-WASTES, REFINERIES, INDUSTRIAL-WASTE-TREATMENT.
MN DRILLING, PETROLEUM- TRANSPORTATION, OIL-STORAGE, COAL- MINES, COKE, BRINES, INJECTION- WELLS, TANKER-SHIPS, WASTE-DISPOSAL, COST-ESTIMATES, PHENOLS, FLOTATION.
ID MINE-ACID-DRAINAGE, LIQUID-WASTE-DISPOSAL, OIL-POLLUTION, OIL-WASTES, WATER-POLLUTION-CONTROL, BIOLOGICAL-INDUSTRIAL-WASTE-TREATMENT.
AN N PB-214 610/8.

<999>

AU REINER A M.
YR 72.
TI METABOLISM OF AROMATIC COMPOUNDS IN BACTERIA PURIFICATION AND PROPERTIES OF THE CATECHOL FORMING ENZYME 3 5 CYCLO HEXADIENE-1 2-DIOL-1-CARBOXYLIC-ACID NAD OXIDO REDUCTASE DECARBOXYLATING.
SO J BIOL CHEM. 247 (16). 4960-4965.
DE ALCALIGENES-EUTROPHUS CHROMATOGRAPHY ELECTROPHORESIS.
AN B 55021826.

<1000>

AU REINER A M.
YR 71.
TI METABOLISM OF BENZOIC ACID BY BACTERIA: 3,5-CYCLOHEXADIENE-1,2-DIOL-1-CARBOXYLIC ACID IS AN INTERMEDIATE IN THE FORMATION OF CATECHOL.
SO J BACTERIOL. 108. 1. P89-94. OCT 71.
LG EN.
MJ ALCALIGENES: ME. BENZOATES: ME.
MN ALCALIGENES: EN. AZOTOBACTER: EN. CARBOXYLIC-ACIDS: BI, ME. CHEMISTRY. OXIDOREDUCTASES: ME. PSEUDOMONAS: EN.
AN M 72049373.

<1001>

AU REINER A M. HEGEMAN G D.
YR 71.
TI METABOLISM OF BENZOIC ACID BY BACTERIA. ACCUMULATION OF (-)-3,5-CYCLOHEXADIENE-1,2-DIOL-1-CARBOXYLIC ACID BY MUTANT STRAIN OF ALCALIGENES EUTROPHUS.
SO BIOCHEMISTRY. 10. 13. P2530-6. 22 JUN 71.
LG EN.
MJ ALCALIGENES: ME.
MN CATECHOLS: BI. HYDROCARBONS-HALOGENATED: ME. OXYGEN-ISOTOPES. SPECTROPHOTOMETRY. ULTRAVIOLET-RAYS.
AN M 71251014.

<1002>

AU REPKINA, V. I.
IN NAUCHNO-ISSLED. INST. KHIM. POLIM. MATER. TAMBOV. USSR.
YR 70.
TI OXIDATION OF AQUEOUS SOLUTIONS OF PHENOL BY ATMOSPHERIC OXYGEN DURING AUTOCLAVING.
SO SIN. ISSLED. EFF. KHIM. POLIM. MATER. NO. 4. P367-70. 1970.
LG RS.
DE PHENOL OXIDN AIR AUTOCLAVE. PAPER

CHROMATOG PHENOL OXIDN PRODUCT. PHOTOMETRY PHENOL OXIDN PRODUCT.
AN C 07702009397.

<1003>

AU REPKINA, V. I. LOKTYUSHKINA, M. B. TUROVSKAYA, R. V. LATYSHEVA, L. M. VELKOTRUB, M. N.
IN NAUCHNO-ISSLED. INST. KHIM. POLIM. MATER. TAMBOV. USSR.
YR 73.
TI DETERMINATION OF BENZOTHIAZOLE IN CAPTAX, ALTAX, AND WASTE WATERS.
SO ZAVOD. LAB. 39. P792-4. 1973.
LG RS.
DE BENZOTHIAZOLE DETN. CAPTAX ANALYSIS BENZOTHIAZOLE. ALTAX ANALYSIS BENZOTHIAZOLE. WASTE WATER ANALYSIS BENZOTHIAZOLE. WATER WASTE ANALYSIS BENZOTHIAZOLE. VULCANIZATION ACCELERATOR ANALYSIS BENZOTHIAZOLE. ACCELERATOR VULCANIZATION ANALYSIS BENZOTHIAZOLE.
AN C 07920121638.

<1004>

AU REYNOLDS J H. MIDDLEBROOKS E J. PORCELLA D B. GRENNEY W J.
YR 75.
TI EFFECTS OF TEMPERATURE ON OIL REFINERY WASTE TOXICITY.
SO J WATER POLLUT CONTROL FED. 47 (11). 2674-2693.
DE SELENASTRUM-CAPRICORNUTUM GREEN ALGA PHENOL AQUATIC FOOD CHAIN LAGOON TREATMENT.
AN B 62005480.

<1005>

AU REYNOLDS, JAMES H. MIDDLEBROOKS, E. JOE. PORCELLA, DONALD B. GRENNEY, WILLIAM J.
IN UTAH WATER RESEARCH LAB. LOGAN. TECHNOLOGY, WASHINGTON, D.C. 405 725.
YR 74. 119P*.
TI A CONTINUOUS FLOW KINETIC MODEL TO PREDICT THE EFFECTS OF TEMPERATURE ON THE TOXICITY OF WASTE TO ALGAE.
PR PC$5.25/MF$2.25.
AB MANY INDUSTRIES, SUCH AS PULP AND PAPER MILLS, TANNERIES, AND OIL REFINERIES, DISCHARGE TOXIC WASTES AT EXTREMELY HIGH TEMPERATURES. THE TEMPERATURE OF AN OIL REFINERY WASTE MAY RANGE FROM 22C TO 41C. THESE HIGH TEMPERATURES COULD HAVE A SIGNIFICANT EFFECT ON THE TOXICITY OF A GIVEN WASTE. THEREFORE, IT IS NECESSARY TO DEVELOP RELATIONSHIPS WHICH WILL EVALUATE AND PREDICT THE EFFECTS OF INCREASED TEMPERATURE ON THE TOXICITY OF VARIOUS WASTES. EQUATIONS HAVE BEEN DEVELOPED UTILIZING CONTINUOUS FLOW STIRRED TANK REACTOR KINETICS AND ENZYME INHIBITION KINETICS TO DESCRIBE THE EFFECTS OF TEMPERATURE ON TOXICITY TO MICROORGANISMS. THESE EQUATIONS WERE TESTED BY SEMICONTINUOUS AND CONTINUOUS FLOW EXPERIMENTS WITH PHENOL AND THE ALGAE SELENASTRUM CAPRICORNUTUM. COMPARISON OF THE COMPETITIVE INHIBITION CONSTANTS, KI, FOR S. CAPRICORNUTUM EXPOSED TO PHENOL AT 20C, 24C, AND 28C, INDICATES THAT PHENOL TOXICITY INCREASES WITH AN INCREASE IN TEMPERATURE ACCORDING TO THE ARRHENIUS FUNCTION.
MJ WATER-POLLUTION, ALGAE.
MN ENZYMES, HEAT, TEMPERATURE, PHENOLS, INDUSTRIAL-WASTES, TOXICITY, AQUATIC-PLANTS, MATHEMATICAL-MODELS, INDICATOR- SPECIES, CYANOPHYTA.
ID WATER-POLLUTION-EFFECTS-PLANTS, THERMAL-POLLUTION, SELENASTRUM-CAPRICORNUTUM, BIOINDICATORS, NTISDIOWRT.
AN N PB-239 194/4SL.

<1006>

AU REYNOLDS, JAMES H. MIDDLEBROOKS, E. JOE. PORCELLA, DONALD B.
IN UTAH WATER RESEARCH LAB. LOGAN. TECHNOLOGY, WASHINGTON, D.C.
YR 73. 44P*.
TI A CONTINUOUS FLOW KINETIC MODEL TO PREDICT THE EFFECTS OF TEMPERATURE ON THE TOXICITY OF OIL REFINERY WASTE TO ALGAE.
NT RESEARCH REPT.
PR PC$3.75/MF$2.25.
AB THE TEMPERATURE OF AN OIL REFINERY WASTE MAY RANGE FROM 22C (71F) TO 41C (106F). THESE HIGH TEMPERATURES COULD HAVE A SIGNIFICANT EFFECT ON THE TOXICITY OF A GIVEN WASTE. IT IS THEREFORE NECESSARY TO DEVELOP RELATIONSHIPS WHICH WILL EVALUATE AND PREDICT THE EFFECTS OF INCREASED TEMPERATURE ON THE TOXICITY OF VARIOUS WASTES. EQUATIONS HAVE BEEN DEVELOPED UTILIZING CONTINUOUS FLOW STIRRED TANK REACTOR (CHEMOSTAT) KINETICS AND ENZYME INHIBITION KINETICS TO DESCRIBE THE EFFECTS OF TEMPERATURE ON TOXICITY TO

MICROORGANISMS. THESE EQUATIONS WERE TESTED BY SEMICONTINUOUS AND CONTINUOUS FLOW EXPERIMENTS WITH PHENOL AND THE ALGAE SELENASTRUM CAPRICORNUTUM. THE DATA OBTAINED WERE FITTED TO COMPETITIVE, UNCOMPETITIVE, AND NONCOMPETITIVE INHIBITOR MODELS. THE RESULTS INDICATED THAT PHENOL EXERTS A COMPETITIVE INHIBITION EFFECT ON THE GROWTH OF S. CAPRICORNUTUM.

MJ TOXICOLOGY, ALGAE, PHENOLS.
MN INDUSTRIAL-WASTES, MICROORGANISMS, INDICATOR-SPECIES, PETROLEUM-REFINING, MATHEMATICAL-MODELS, WATER-POLLUTION, TABLES-DATA, BIOASSAY, KINETICS.
ID WATER-POLLUTION-EFFECTS-PLANTS, SELENASTRUM-CAPRICORNUTUM, THERMAL-POLLUTION, BIOINDICATORS, NTISDIOWRT.
AN N PB-237 699/4SL.

<1007>

AU RIBBONS D W. HARRISON J E. WADZINSKI A M.
YR 70.
TI METABOLISM OF SINGLE CARBON COMPOUNDS.
SO ANNU REV MICROBIOL. 24. P135-58. 1970.
LG EN.
MJ BACTERIA: ME.
MN ALCOHOL-METHYL: ME. EN. MICROSCOPY-ELECTRON. OXYGENASES: ME. TRANSFERASES: ME.
AN M 71181836.

<1008>

AU RIBBONS D W. HARRISON J E. WADZINSKI A M.
YR 70.
TI METABOLISM OF SINGLE CARBON COMPOUNDS.
SO ANNU REV MICROBIOL. 24. P135-58. 1970.
LG EN.
MJ BACTERIA: ME.
MN ALCOHOL-METHYL: ME. EN. MICROSCOPY-ELECTRON. OXYGENASES: ME. TRANSFERASES: ME.
AN M 71181836.

<1009>

AU RISEMAN, JOHN H.
IN ORION RES. INC. CAMBRIDGE. MASS.
YR 72.
TI ELECTRODE TECHNIQUES FOR MEASURING CYANIDE IN WASTE WATERS.
SO AMER. LAB. 4. P63-4,66-7. 1972.
LG EN.
DE CYANIDE DETN WATER. WATER ANALYSIS CYANIDE.
AN C 07822140030.

<1010>

AU RISTANOVIC, BOSILJKA. MUNTANJOLA-CVETKOVIC, M. MUNJKO, IGNJAC.
IN MAR. BIOL. STN. KOTOR INST. BIOL. RES. BELGRADE. YUGOSLAVIA.
YR 75.
TI PHENOL-DEGRADING FUNGI FROM SOUTH ADRIATIC SEA AND LAKE SKADAR.
SO EUR. J. APPL. MICROBIOL. 1. P313-22. 1975.
LG EN.
DE PHENOL DEGRDN FUNGI. SEAWATER PHENOL DEGRDN FUNGI. LAKE PHENOL DEGRDN FUNGI.
AN C 08511074689.

<1011>

AU ROBBINS, PHILLIPS W.
IN MASSACHUSETTS INST. OF THE TECH. CAMBRIDGE. SEA GRANT PROJECT OFFICE.
YR 71. 59P.
TI STUDENT PROJECTS ON THE OXIDATION BY MARINE BACTERIA OF AROMATIC COMPOUNDS FOUND IN OIL.
NT REPORT ON EXPERIMENTAL BIOCHEMISTRY.
PR PC$3.00 MF$0.95.
AB THE STUDENT PROJECT REPORTS CONTAINED IN THE SEA GRANT REPORT WERE SELECTED FOR THEIR QUALITY AND RESULTS RELATIVE TO THE TIMELY SUBJECT OF BIODEGRADATION OF HYDROCARBONS BY MARINE BACTERIA, AND ARE: CATECHOL 2, 3 OXYGENASE; OXIDATION OF NAPHTHALENE BY A MARINE BACTERIUM; THE METABOLISM OF QUINOLINE AND RELATED COMPOUNDS BY MARINE BACTERIA; AND THE EVIDENCE FOR THE EXISTENCE OF PROTOCATECHUATE 3, 4-OXYGENASE IN MARINE YEAST ISOLATED WITH PARAHYDROXYLBENZOIC ACID. (OSG ABSTRACT).
MJ OILS, BIODETERIORATION, AROMATIC-COMPOUNDS, BIODETERIORATION, NAPHTHALENE, BIODETERIORATION, PHENOLS, BIODETERIORATION, WATER-POLLUTION, OILS.
MN MARINE-BIOLOGY, OXIDATION, ENZYMES, QUINOLINES, YEASTS, AQUATIC-MICROBIOLOGY.
ID OIL-POLLUTION, OXYGENASE-CATECHOL-2-3, OXYGENASE-

PROTOCATECHUATE.
AN N COM-71-00878.

<1012>

AU RODGERS, B. R. WESTMORELAND, P. R.
IN OAK RIDGE NATIONAL LAB. TENN. ADMINISTRATION. 4832000.
YR 76. 31P.
TI AGGLOMERATION AND SEPARATION OF MICRON-SIZED PARTICLES FROM COAL LIQUEFACTION STREAMS.
NT 81. NATIONAL MEETING OF THE AMERICAN INSTITUTE OF CHEMICAL ENGINEERS. KANSAS CITY, MISSOURI, UNITED STATES OF AMERICA (USA), 11 APR 1976.
PR PC$4.00/MF$3.00.
AB OPTICAL MICROSCOPY WAS USED TO SHOW AGGLOMERATION OF SOLIDS PRODUCED BY SOLVENTS SUCH AS TOLUENE IN COAL CONVERSION LIQUIDS. SETTLING AND FILTRATION RATES WERE INCREASED SUBSTANTIALLY AFTER AGGLOMERATION. RESULTS OF LABORATORY EXPERIMENTS DEMONSTRATED THAT A 50 PERCENT OVERFLOW OF CLARIFIED SPECIFICATION PRODUCT WAS OBTAINED AFTER SETTLING FOR 1 HR. AND THAT FILTRATION RATES WERE INCREASED BY A FACTOR OF 4. PROCESS-DERIVED SOLVENT WAS ALSO BENEFICIAL IN INCREASING SETTLING AND FILTRATION RATES. HOWEVER, THE LARGEST INCREASES IN FILTRATION RATES WERE REALIZED BY A COMBINED SETTLING-FILTRATION OPERATION. GROUND COAL WAS FOUND TO BE AN ECONOMICAL SUBSTITUTE FOR DIATOMACEOUS EARTH AS A PRECOAT MATERIAL FOR FILTRATION OF COAL CONVERSION STREAMS. FILTRATION RATES WERE INCREASED SLIGHTLY BY THE GROUND COAL PRECOAT UNDER STANDARD OPERATING CONDITIONS, BUT MAJOR RATE INCREASES WERE REALIZED BY MAINTAINING ULTRATHIN FILTER CAKES AT THE TOP OF THE COAL PRECOAT. COAL PRECOAT, WHICH MAY BE COLLECTED WITH THE SOLIDS IN A COMMERCIAL PROCESS, ENHANCED THE VALUE OF THE SOLIDS AS A GASIFIER FEED TO PRODUCE HYDROGEN OR METHANE. GROUND COAL CAN ALSO BE ADDED TO THE LIQUID STREAM TO SERVE AS A ''BODY FEED'' AND PRODUCE INCREASED FILTRATION RATES. THE COAL BODY FEED WOULD ALSO PROVIDE AN ADJUSTABLE PARAMETER FOR CONTROLLING THE AMOUNT OF HYDROCARBON FED TO THE GASIFIER. SOME RECENT ADVANCES USING ADDITIVES IN THE PARTS-PER-MILLION RANGE TO INCREASE SETTLING AND FILTRATION RATES ARE DISCUSSED. FUTURE RESEARCH DIRECTIONS ARE OUTLINED BRIEFLY. (ERA CITATION 01: 018475).
MJ COAL-LIQUEFACTION, COAL-LIQUIDS.
MN PARTICLES, AGGLOMERATION, COAL, CRUSHING, ECONOMICS, FILTRATION, OPTICAL-MICROSCOPY, ORGANIC-SOLVENTS, PARTICLE-SIZE, PURIFICATION, SEPARATION-PROCESSES, SOLIDS, SOLVENT-EXTRACTION, SOLVENT-REFINED-COAL, TOLUENE.
ID ERDA-010405, MEETINGS, PLANNING, NTISERDA.
AN N CONF-760402-6.

<1013>

AU ROGOZHIN, G. I.
IN USSR.
YR 71.
TI OXIDATION OF DIMETHYLAMINE BY OZONE IN AQUEOUS SOLUTIONS.
SO TR. VSES. NAUCH.-ISSLED. INST. VODOSNABZH. KANALIZ. GIDROTEKH. SOORUZH. INZH. GIDROGEOL. 33. P54-8. 1971.
LG RS.
DE OXIDN DIMETHYLAMINE OZONE.
AN C 07720130380.

<1014>

AU ROMANENKO V I. KUZNETSOV S I.
YR 76.
TI THE USE OF LABELED CARBON-14 PHENOL FOR DETERMINING ITS CONTENT AND THE RATE OF ITS UTILIZATION BY THE MICRO FLORA OF WATER BODIES.
SO MIKROBIOLOGIYA. 45 (1). 166-168.
DE RESERVOIRS RUSSIAN-SFSR USSR ENZYMATIC REACTIONS.
AN B 62048386.

<1015>

AU ROSFJORD, R E. CHEREMISINOFF, P N. TRATTNER, R B.
IN NEW JERSEY INST. OF TECHNOLOGY, NEWARK, NJ 07102.
YR 76.
TI PHENOLS: A WATER POLLUTION CONTROL ASSESSMENT.
SO WATER & SEWAGE WORKS. 123(3): 96-99, MAR. 1976.
LG EN.
AB NONE.
ID PHENOLS.
DE WASTEWATER TREATMENT, AROMATIC COMPOUNDS, WATER POLLUTION CONTROL.
AN P 7604266.

<1016>
AU ROSSI S S. ANDERSON J W. WARD G S.
YR 76.
TI TOXICITY OF WATER SOLUBLE FRACTIONS OF 4 TEST OILS FOR THE POLYCHAETOUS ANNELIDS NEANTHES- ARENACEODENTATA AND CAPITELLA- CAPITATA.
SO ENVIRON POLLUT. 10 (1). 9-18.
DE FISH CRUSTACEAN SOUTH LOUISIANA USA KUWAIT VENEZUELA NAPHTHALENE CONCENTRATION.
AN B 61058078.

<1017>
AU ROUBAL, WILLIAM T. COLLIER, TRACY K. MALINS, DONALD C.
IN NORTHWEST ALASKA FISH. CENT. NATL. MAR. FISH. SERV. SEATTLE. WASH.
YR 77.
TI ACCUMULATION AND METABOLISM OF CARBON-14 LABELED BENZENE, NAPHTHALENE, AND ANTHRACENE BY YOUNG COHO SALMON (ONCORHYNCHUS KISUTCH).
SO ARCH. ENVIRON. CONTAM. TOXICOL. 5. P513-29. 1977.
LG EN.
DE SALMON BENZENE NAPHTHALENE ANTHRACENE.
AN C 08721162343.

<1018>
AU ROYER, JAMES L. TWICHELL, JAMES E. MUIR, STEPHEN M.
IN DIV. LAB. SERV. STATE ILLINOIS ENVIRON. PROT. AGENCY. CHAMPAIGN. ILL.
YR 73.
TI AUTOMATED COLORIMETRIC METHOD FOR TOTAL CYANIDE IN WATER AND WASTE WATER.
SO ANAL. LETT. 6. P619-27. 1973.
LG EN.
DE CYANIDE DETN WATER. WATER ANALYSIS CYANIDE. WASTE WATER ANALYSIS CYANIDE.
AN C 07916096498.

<1019>
AU RUCHHOFT, C. C. . MOORE, W. A. . TERHOEVEN, G. E. . MIDDLETON, F. M. KRIEGER, H. L.
IN ENVIRONMENTAL HEALTH CENTER, CINCINNATI, OHIO.
YR 49. 21P.
TI TENTATIVE ANALYTICAL METHODS FOR CADMIUM, CHROMIUM, AND CYANIDE IN WATER.
PR PC$3.25/MF$0.95.
AB CONTENTS: COLLECTION, PRESERVATION, AND PREPARATION OF SAMPLES; QUALITATIVE PROCEDURE; QUANTITATIVE PROCEDURE; PYRIDINE- BENZIDINE METHOD; MODIFIED LIEBIG METHOD; MODIFIED LIEBIG METHOD USING AN INTERNAL INDICATOR; PRUSSIAN BLUE METHOD; LITERATURE ON CYANIDE DETERMINATION.
MJ WATER-ANALYSIS, WATER-POLLUTION, CADMIUM, WATER-ANALYSIS, CHROMIUM, WATER-ANALYSIS, CYANIDES, WATER-ANALYSIS.
MN OHIO-RIVER, POTABLE-WATER, CHEMICAL-ANALYSIS.
ID WATER-POLLUTION-DETECTION, EPAL.
AN N PB-215 059.

<1020>
AU RUDLING, L. SOLYOM, P.
IN SWEDISH WATER AND AIR POLLUTION RESEARCH LAB. STOCKHOLM SWEDEN.
YR 74.
TI THE INVESTIGATION OF BIODEGRADABILITY OF BRANCHED NONYL PHENOL ETHOXYLATES.
SO WATER RESEARCH, 8(2): 115-119, FEB. 1974.
LG EN.
AB NONE.
ID NONYL PHENOL ETHOXYLATES.
DE ACTIVATED SLUDGE, BIODEGRADATION, CHEMICAL POLLUTANTS, ESTERS.
AN P 7500266.

<1021>
AU RUESINK R G. SMITH L L JR.
YR 75.
TI THE RELATIONSHIP OF THE 96 HOUR MEDIAN LETHAL CONCENTRATION TO THE LETHAL THRESHOLD CONCENTRATION OF HEXAVALENT CHROMIUM PHENOL AND SODIUM PENTA CHLORO PHENATE FOR FATHEAD MINNOWS PIMEPHALES-PROMELAS.
SO TRANS AM FISH SOC. 104 (3). 567-570.
DE HERBICIDE TEMPERATURE EFFECT.
AN B 61040590.

<1022>
AU RUMMEL, W.
IN INST. WASSERWIRTSCH. BERLIN. GER.
YR 69.
TI CONTROL AND TREATMENT OF ORGANIC POLLUTION IN WATER.
SO WISS. Z. UNIV. ROSTOCK, MATH.-NATURWISS. REIHE. 18. P847-58. 1969.
LG GE.

DE ADSORPTION ORG POLLUTANT. OXIDN ORG POLLUTANT. PHENOLS DEGRDN SEWAGE . ALDEHYDE DEGRDN SEWAGE. OLEFIN DEGRDN SEWAGE. INDOLE DEGRDN SEWAGE . HUMIC SUBSTANCE DEGRDN SEWAGE. CYANIDE DEGRDN SEWAGE. HYDROCARBON DEGRDN SEWAGE. DYE DEGRDN SEWAGE.
AN C 07516101095.

<1023>

AU RYBAK, I. I.
IN USSR.
YR 74.
TI SEPARATION OF WATER-PHENOL MIXTURES BY REVERSE OSMOSIS.
SO NEFTEPERERAB. NEFTEKHIM. (MOSCOW). P41-6. 1974.
LG RS.
DE PHENOL SEPN WASTEWATER REVERSE OSMOSIS.
AN C 08114082034.

<1024>

AU RYZHKOV, L. P.
IN GOS. NAUCHNO-ISSLED. INST. OZERN. RECHN. RYBN. KHOZ. PETROZAVODSK. USSR.
YR 70.
TI GAS METABOLISM (OF FRY) STUDIED DURING TOXICOLOGICAL INVESTIGATIONS.
SO VOP. VOD. TOKSIKOL. P47-52. 1970.
LG RS.
AV TOPACHEVSKII, A. V.
DE FISH RESPIRATION MALACHITE GREEN. SALMON GAS METAB FORMALIN. TROUT GAS METAB FORMALIN.
AN C 07513085831.

<1025>

AU SACHER, REUVEN MORDECHAI.
IN UNIVERSITY OF CALIFORNIA, RIVERSIDE (0032) PH.D. 1967 215PP.
YR 67.
TI METABOLISM, STRUCTURE-ACTIVITY RELATIONSHIPS AND MODE OF ACTION OF NAPHTHALENE-BASED SYNERGISTS.
SO DAI V29(01), SEC B, P0233.
DE ENTOMOLOGY (0353).
AN D ADG68-09763.

<1026>

AU SADANA, AJIT JAICHAND.
IN DELAWARE UNIV. NEWARK. DEPT. OF CHEMICAL ENGINEERING. WATER RESEARCH AND TECHNOLOGY, WASHINGTON, D.C.
YR 75. 207P.
TI INVOLVEMENT OF FREE RADICALS IN THE CATALYTIC OXIDATION OF PHENOL IN AQUEOUS SOLUTION.
NT DOCTORAL THESIS.
PR PC A10/MF A01.
AB AQUEOUS-PHASE CATALYTIC OXIDATION OF PHENOL OVER SUPPORTED COPPER OXIDE WAS STUDIED FROM 369 TO 452 DEGREES K AND 14.7 TO 250 PSIG OXYGEN PRESSURE IN BATCHWISE MODE. THE REACTION INVOLVES AN INDUCTION PERIOD AND A STEADY-STATE ACTIVITY REGIME. THE INITIAL RATE IS FIRST ORDER IN PHENOL AND IN OXYGEN; THE STEADY-STATE RATE IS FIRST ORDER IN PHENOL AND ONE-HALF ORDER IN OXYGEN. FREE RADICAL INVOLVEMENT IN THE HETEROGENEOUSLY CATALYZED OXIDATION OF PHENOL WAS ESTABLISHED. REACTION NETWORKS ARE SIMILAR FOR THE HETEROGENEOUSLY AND HOMOGENEOUSLY CATALYZED OXIDATION OF PHENOL AS FAR AS QUINONES. INTERMEDIATES SUCH AS ORGANIC ACIDS, WHICH ARE OBSERVED IN HOMOGENEOUS OXIDATION, WERE NOT OBSERVED IN THE HETEROGENEOUSLY CATALYZED OXIDATION. AQUEOUS-PHASE HETEROGENEOUSLY CATALYZED OXIDATION REMOVES ORGANIC CARBON, INITIALLY CHARGED AS PHENOL, FROM SOLUTION EFFICIENTLY AT MODERATE TEMPERATURES AND PRESSURES. THE LESS SEVERE CONDITIONS REQUIRED FOR AQUEOUS-PHASE CATALYTIC OXIDATION OF ORGANICS MAKE IT APPEAR MUCH MORE ECONOMICAL THAN NON-CATALYZED WET AIR OXIDATION. (KATZER-DELAWARE).
MJ CATALYSTS, PHENOLS, OXIDATION, WATER-POLLUTION-CONTROL, INDUSTRIAL-WASTES.
MN CHEMICAL-REACTION, REACTION-KINETICS, CHEMICAL-INDUSTRY, ORGANIC-COMPOUNDS, PETROLEUM-INDUSTRY, SUBSTITUTES, COST-ANALYSIS, EXPERIMENTAL-DESIGN, LABORATORY-EQUIPMENT, INHIBITORS, PH, TABLES-DATA.
ID FREE-RADICALS, HETEROGENEOUS-REACTIONS, HOMOGENEOUS-REACTIONS, PROCEDURES, NTISDIOWRT.
AN N PB-267 810/0SL.

<1027>

AU SAGARDIA F. RIGAU J J. MARTINEZ-LAHOZ A. FUENTES F. LOPEZ C. FLORES W.
IN DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF PUERTO RICO, SCHOOL OF MEDICINE, RIO PIEDRAS, PUERTO RICO 00936.
YR 75.

TI DEGRADATION OF BENZOTHIOPHENE AND RELATED COMPOUNDS BY A SOIL PSEUDOMONAS IN AN OIL-AQUEOUS ENVIRONMENT.
SO APPL MICROBIOL. 29. 6. P722-5. JUN 75.
LG EN.
MJ PSEUDOMONAS-AERUGINOSA: ME.
MN BIODEGRADATION. HYDROXYMERCURIBENZOATES: PD.
AN M 75223527.

<1028>
AU SAKAI, KAORU.
IN HITACHI, LTD. TOKYO, JAPAN.
YR 72.
TI POLLUTION-MEASURING EQUIPMENT AND ITS SOFTWARE. IV. WATER POLLUTION MEASUREMENT. 1.
SO KEISO. 15. P64-8. 1972.
LG JA.
DE REVIEW WATER POLLUTION MEASURING APP. PHENOLS DETN WATER REVIEW. ION SELECTIVE ELECTRODE REVIEW. ELEC COND MEASURING APP REVIEW.
AN C 07716105342.

<1029>
AU SAKIYA Y. UMEZAWA N. HANANO M.
YR 74.
TI KINETICS ON UPTAKE OF DRUGS IN GOLDFISH PART 1 EFFECT OF PH CHANGE IN WATER PHASE AND ADDITION OF POLY ETHYLENE GLYCOL 6000 AND UREA ON UPTAKE OF SALICYLIC-ACID.
SO YAKUGAKU ZASSHI. 94 (9). 1123- 1130.
DE METABOLISM.
AN B 59027264.

<1030>
AU SAL'NIKOVA, L. S. KATOLIKOVA, S. N. SHAMSUTDINOVA, F. G.
IN USSR.
YR 70.
TI DETERMINATION OF THE COMPOSITION OF WASTE WATERS OF CRESOL PRODUCTION BY THE OXIDATIVE DECARBOXYLATION OF M-TOLUIC ACID.
SO TR. NAUCH.-ISSLED. INST. NEFTEKHIM. PROIZVOD. NO. 2. P126-9. 1970.
LG RS.
DE CRESOL PRODN WASTE WATERS. TOLUIC ACIDS WASTES CRESOL PRODN. PHENOL CRESOL PRODN WASTE WWATERS. BOD CRESOL WASTES.
AN C 07414067441.

<1031>
AU SAL'NIKOVA, L. SH. YARULLINA, R. K. SHAMSUTDINOVA, F. G.
IN USSR.
YR 77.
TI OZONIZATION AS A METHOD FOR THE DETOXICATION OF UNDERGROUND WATERS POLLUTED WITH WASTES FROM THE PETROCHEMICAL INDUSTRY.
SO NEFTEPERERAB. NEFTEKHIM. (MOSCOW). P32-3. 1977.
LG RS.
DE WELL WATER PURIFN OZONIZATION. PHENOL REMOVAL WELL WATER. PETROLEUM PRODUCT REMOVAL WELL WATER.
AN C 08704028793.

<1032>
AU SALA-TREPAT, J. M. MURRAY, K. WILLIAMS, P. A.
IN DEP. BIOCHEM. SOIL SCI. UNIV. COLL. NORTH WALES. BANGOR/CAERNS. WALES .
YR 71.
TI PHYSIOLOGICAL SIGNIFICANCE OF THE TWO DIVERGENT METABOLIC STEPS IN THE META CLEAVAGE OF CATECHOLS BY PSEUDOMONAS PUTIDA.
SO BIOCHEM. J. 124. P20P-21P. 1971.
LG EN.
DE PSEUDOMONAS CATECHOL ENZYME. OXYGENASE CATECHOL BACTERIA.
AN C 07601001686.

<1033>
AU SAMPSON K L. FINNERTY W R.
YR 74.
TI REGULATION OF FATTY ACID BIOSYNTHESIS IN THE HYDROCARBON OXIDIZING MICROORGANISM, ACINETOBACTER SP.
SO ARCH MICROBIOL. 99. 3. P203-20. 1974.
LG EN.
MJ ALCALIGENES: ME. ME.
MN ACETATES. CHROMATOGRAPHY-THIN-LAYER. OXIDATION-REDUCTION. SILICIC-ACID.
AN M 75053669.

<1034>
AU SANBORN H R. MALINS D C.
YR 77.
TI TOXICITY AND METABOLISM OF NAPHTHALENE A STUDY WITH MARINE LARVAL INVERTEBRATES.
SO PROC SOC EXP BIOL MED. 154 (2). 151-155.
DE CANCER-MAGISTER PANDALUS- PLATYCEROS

BOVINE SERUM ALBUMIN CARBON-14 DEPURATION.
AN B 64048065.

<1035>
AU SAPUNKOVA, G. S. SELYANINA, S. G.
IN USSR.
YR 69.
TI USE OF HIGH-FREQUENCY CONDUCTOMETRY IN THE ANALYSIS OF PHENOL AND ACETONE PRODUCTION PRODUCTS.
SO MATER. NAUCH.-TEKH. KONF. KAZAN. ZAVODA ORG. SIN. P111-16. 1969.
LG RS.
AV GUSEV, V. I.
DE PHENOL DETN. ACETONE DETN. WATER ANALYSIS PHENOL. RESIN ANALYSIS PHENOL. HIGH FREQUENCY CONDUCTOMETRY PHENOL ACETONE. CONDUCTOMETRY PHENOL ACETONE DETN.
AN C 07602010093.

<1036>
AU SAPUNKOVA, G. S. STRELYUKHINA, L. M. AKHMETSHINA, F. YA.
IN USSR.
YR 69.
TI COLORIMETRIC DETERMINATION OF AROMATIC HYDROCARBONS IN CHEMICALLY POLLUTED INDUSTRIAL WATER IN THE PRESENCE OF PHENOL.
SO MATER. NAUCH.-TEKH. KONF. KAZAN. ZAVODA ORG. SIN. P117-20. 1969.
LG RS.
AV GUSEV, V. I.
DE AROMS WASTE WATER SPECTROMETRIC. PHENOL AROMATIC WASTE WATER. SODIUM CARBONATE PHENOL INTERFERENCE.
AN C 07522132741.

<1037>
AU SARIASLANI S. HARPER D B. HIGGINS I J.
YR 74.
TI MICROBIAL DEGRADATION OF HYDRO CARBONS CATABOLISM OF 1 PHENYL ALKANES BY NOCARDIA-SALMONICOLOR.
SO BIOCHEM J. 140 (1). 31-45.
DE 1 PHENYLDODECANE ISO CITRATE LYASE ACTIVITY 4 PHENYL BUTYRATE PHENYL ACETATE CINNAMATE 3 4 DI HYDROXYPHENYL ACETATE CATECHOL PROTO CATECHUATE 1 PHENYLNONANE RING CLEAVAGE ENZYME ACTIVITY RESPIROMETRY DIAUXIE.
AN B 58027683.

<1038>
AU SAXENA, JITENDRA. KOZUCHOWSKI, JACK. BASU, DIPAK K.
IN CENT. CHEM. HAZARD ASSESSMENT. SYRACUSE RES. CORP. SYRACUSE. N. Y.
YR 77.
TI MONITORING OF POLYNUCLEAR AROMATIC HYDROCARBONS IN WATER. I. EXTRACTION AND RECOVERY OF BENZO(A)PYRENE WITH POROUS POLYURETHANE FOAM.
SO ENVIRON. SCI. TECHNOL. 11. P682- 5. 1977.
LG EN.
DE BENZOPYRENE REMOVAL WATER POLYURETHANE.
AN C 08711079154.

<1039>
AU SCACCINI CICATELLI M.
YR 71.
TI BENZO-3 4 PYRENE POLLUTION IN SOME AREAS OF THE ADRIATIC.
SO REV INT OCEANOGR MED. 24. 181-182.
DE ABSTRACT PLANKTON.
AN B 72057965.

<1040>
AU SCACCINI, A. SCACCINI CICATELLI, M. MARANI, F. LEONARDI, V.
IN UNIV. OF PARMA, ISTITUTO DI ANATOMIA DEGLI ANIMALI DOMESTICI, IT.
YR 70.
TI DOSAGGIE SPETTROFOTOFLUORIMETRICI ED OSSERVAZIONI MEDIANTE MICROSCOPIA A FLUORESCENZA DEL BENZO 3-4 PIERENE SU ORGANI E TESSUTI DI CARRASSIUS AURATUS.
SO BOLOGNA. UNIVERSITA. ISTITUTO ZOOLOGICO. LABORATORIO DI BIOLOGIA MARINA E PESCA-FANO. NOTE, 3(6): 105, 107-141, 1970.
LG XX.
AB NONE.
ID HISTOLOGY, BENZO 3-4 PYRENE, *CARASSIUS AURATUS.
DE METABOLISM, HYDROCARBONS, FISHES.
AN P 7006934.

<1041>
AU SCASSELLATI SFORZOLINI, G. SAVINO, A. MONARCA, S.
IN IST. IG. UNIV. PERUGIA. PERUGIA. ITALY.
YR 74.
TI DECONTAMINATION OF POLLUTED WATERS BY POLYNUCLEAR AROMATIC HYDROCARBONS, (PAH). II. ACTION OF CHLORINE AND OZONE ON PAH IN

DRINKING WATER AND IN RIVER WATER.
SO IG. MOD. 66. P595-619. 1974.
LG IT.
DE OZONE EFFECT DRINKING WATER.
CHLORINE EFFECT DRINKING WATER.
BENZOFLUORANTHENE OZONE DRINKING WATER.
AN C 08116096270.

<1042>

AU SCHEIER A. GOMINGER D.
IN ACADEMY OF NATURAL SCIENCES OF PHILADELPHIA, DIVISION OF LIMNOLOGY AND ECOLOGY, PHILADELPHIA, PENN.
YR 76.
TI A PRELIMINARY STUDY OF THE TOXIC EFFECTS OF IRRADIATED VS. NON-IRRADIATED WATER SOLUBLE FRACTIONS OF NO. 2 FUEL OIL.
SO BULL ENVIRON CONTAM TOXICOL. 16. 5. P595-603. NOV 76.
LG EN.
MJ FUEL-OILS: TO.
MN ANIMAL. SHRIMP. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 77045979. 7703.

<1043>

AU SCHLIPKOETER, HANS W. GRUENSPAN, M.
IN INST. HYG. UNIV. DUESSELDORF. DUESSELDORF. GER.
YR 69.
TI INFRARED SPECTROPHOTOMETRIC INVESTIGATION OF THE MICROBIAL DEGRADATION OF PARAFFINS SUCH AS HEPTADECANE.
SO ARCH. HYG. BAKTERIOL. 153. P538- 43. 1969.
LG GE.
DE PSEUDOMONAS PARAFFINS. PARAFFINS PSEUDOMONAS. SPECTROSCOPY PARAFFINS.
AN C 07319095644.

<1044>

AU SCHLUETER, ALBERT.
IN CENTRAL STATE UNIV. WILBERFORCE, OHIO. DEPT. OF CHEMISTRY. ENVIRONMENTAL MONITORING AND SUPPORT LAB. CINCINNATI, OHIO.
YR 76. 29P.
TI APPLICABILITY OF THE CYANIDE ELECTRODE FOR MEASURING FREE AND TOTAL CYANIDE.
PR PC$4.00/MF$3.00.
AB THE ORION MODEL 94-06 CYANIDE ELECTRODE WAS EVALUATED TO DETERMINE ITS APPLICABILITY TO WATER AND WASTEWATERS. THE CALIBRATION CURVE WAS NERNSTIAN OVER THE CONCENTRATION RANGE OF 0.26 TO 26 PPM, AND THE SLOPE OF THE CURVE WAS 59 MV PER DECADE CHANGE. THIS WORK CONSISTED IN STUDYING THE RESPONSE OF THE CYANIDE ELECTRODE TO CYANIDE WHEN THIS ION WAS PRESENT IN SOLUTION IN BOTH FREE AND COMPLEX FORMS. THE RESULTS SHOW CONCLUSIVELY THAT THE ELECTRODE RESPONDS ONLY TO FREE CYANIDE IN SOLUTION AND NOT AT ALL TO THAT COMPLEXED TO METALS.
MJ CYANIDES, ELECTRODES, WATER-ANALYSIS.
MN PH-METERS, WATER-POLLUTION, MONITORING, CONCENTRATION-COMPOSITION, IONS, INDUSTRIAL-WASTES, SURFACE-WATERS, LABORATORY-TESTS, FIELD-TESTS, DISTILLATION, HYDROLYSIS, METAL-COMPLEXES.
ID WATER-POLLUTION-DETECTION, MONITORS, ION-SELECTIVE-ELECTRODES, NTISEPAORD.
AN N PB-255 852/6SL.

<1045>

AU SCHMIDT, C. E. SHARKEY, A. G. JR. FRIEDEL, R. A.
IN BUREAU OF MINES, PITTSBURGH, PA. PITTSBURGH ENERGY RESEARCH CENTER.
YR 74. 11P.
TI MASS SPECTROMETRIC ANALYSIS OF PRODUCT WATER FROM COAL GASIFICATION.
NT TECHNICAL PROGRESS REPT. 1973.
PR PC$3.25/MF$2.25.
AB CONDENSATE WATERS FROM THE BUREAU OF MINES SYNTHANE PROCESS FOR COAL GASIFICATION HAVE BEEN INVESTIGATED BY MASS SPECTROMETRIC METHODS TO DETERMINE THE ORGANIC CONTAMINANTS. WATERS FROM THE GASIFICATION OF SIX COALS WERE EXTRACTED WITH METHYLENE CHLORIDE, YIELDING 0.6 TO 2.4 WEIGHT-PERCENT EXTRACTABLE MATERIAL. USING HIGH- RESOLUTION MASS SPECTROMETRY (HRMS), COMBINED GAS CHROMATOGRAPHY-MASS SPECTROMETRY (GS-MS), AND LOW- VOLTAGE MASS SPECTROMETRY, 60 TO 80 PERCENT OF THE EXTRACT WAS FOUND TO BE PHENOLIC. ABOUT 20 ORGANIC CONTAMINANTS HAVE BEEN IDENTIFIED AND ARE PRESENT IN THE CONDENSATE WATERS FROM EACH COAL GASIFIED. THE RELATIVE DISTRIBUTION OF CONTAMINANTS IN THE CONDENSATE WATER WAS NEARLY THE SAME FOR THE SIX

COALS GASIFIED UNDER VARIOUS CONDITIONS; PHENOLIC COMPOUNDS WERE THE MOST ABUNDANT IN ALL CASES.
MJ INDUSTRIAL-WATER, WATER-ANALYSIS.
MN COAL-GASIFICATION, MASS-SPECTROSCOPY. PHENOLS, WATER-QUALITY.
ID SYNTHANE-PROCESS, NTISDIBM.
AN N PB-240 835/9SL.

<1046>

AU SCHMITZ, WOLFGANG. KOELLE, WALTER.
IN LANDESSTELLE GEWAESSERKD WASSERWIRTSCH. PLANUNG BADEN-WURTTEMBERG. KARLSRUHE. GER.
YR 75.
TI BIOGENIC AND NONBIOGENIC ORGANIC POLLUTANTS.
SO SCHWEIZ. Z. HYDROL. 37. P85-98. 1975.
LG GE.
DE RIVER WATER POLLUTANT RHINE. HYDROCARBON POLLUTANT RIVER RHINE. NITROGEN COMPD POLLUTANT RIVER RHINE. ORG COMPD POLLUTANT RIVER RHINE . ETHER POLLUTANT RIVER RHINE. ALC POLLUTANT RIVER RHINE. PHENOL POLLUTANT RIVER RHINE. ESTER POLLUTANT RIVER RHINE.
AN C 08604021665.

<1047>

AU SCHNEIDER J.
YR 72.
TI LOWER FUNGI AS TEST ORGANISMS OF POLLUTANTS IN SEA AND BRACKISH WATER THE EFFECTS OF HEAVY METAL COMPOUNDS AND PHENOL ON THRAUSTOCHYTRIUM-STRIATUM.
SO MAR BIOL (BERL). 16 (3). (RECD 1973) 214-225.
DE TOXICITY.
AN B 56010545.

<1048>

AU SCHNEIDER, H. GMUENDER, F. FIECHTER, A.
IN INST. MICROBIOL. SWISS FED. INST. TECHNOL. ZURICH. SWITZ.
YR 77.
TI N-ALKANE OXIDATION BY CANDIDA TROPICALIS. II. INDUCTION AND REPRESSION OF CATALASE BY SUBSTRATE-SHIFTS IN A CHEMOSTAT.
SO EUR. J. APPL. MICROBIOL. 3. P283- 8. 1977.
LG EN.
DE CANDIDA CATALASE GLUCOSE HEXADECANE.
AN C 08713098587.

<1049>

AU SCHUBERT J S
YR 70.
TI FORMULATION OF CELL GROWTH INHIBITION BY CHEMICALS AND ENVIRONMENTAL AGENTS.
SO J GEN MICROBIOL. 64. 1. P37-40. NOV 70.
LG EN.
MJ BACTERIA: DE, GD.
MN ACETALDEHYDE: PD. MATHEMATICS.
AN M 71190666.

<1050>

AU SCHULTZ T W. DUMONT J N.
IN OAK RIDGE GRAD. SCH. BIOMED. SERV. UNIV. TENN. OAK RIDGE, TENN. 37830, USA.
YR 77.
TI CYTO TOXICITY OF SYNTHETIC FUEL PRODUCTS ON TETRAHYMENA-PYRIFORMIS PART 1 PHENOL.
SO J PROTOZOOL. 24 (1). 164-172.
LG EN.
DE BEHAVIOR CYTOLOGY RESPIRATION GROWTH MOTILITY COAL CONVERSION SCRUB WATER POTENTIAL ENVIRONMENTAL CONTAMINANT.
AN B 65010318.

<1051>

AU SCHWARTZ, FREDERICK P. WASIK, STANLEY P.
IN NATIONAL BUREAU OF STANDARDS, WASHINGTON, D.C. INST. FOR MATERIALS RESEARCH. 401 937.
YR 75. 6P.
TI FLUORESCENCE MEASUREMENTS OF BENZENE, NAPHTHALENE, ANTHRACENE, PYRENE, FLUORANTHENE, AND BENZO(E)PYRENE IN WATER.
NT FINAL REPT. PUB. IN ANALYTICAL CHEMISTRY, V48 N3 P524-528 MAR 76.
PR PC$3.50/MF$2.25.
AB FLUORESCENCE SPECTRA, QUANTUM YIELDS, AND CONCENTRATION DEPENDENCIES ARE REPORTED FOR FIVE REPRESENTATIVE POLYCYCLIC AROMATIC HYDROCARBONS (PAH) IN WATER TO ASCERTAIN THE APPLICABILITY OF MEASURING PAH IN AQUEOUS SYSTEMS BY SPECTROFLUORIMETRY. THE FLUORESCENCE QUANTUM YIELDS OF BENZENE, NAPHTHALENE, ANTHRACENE, PYRENE, FLUORANTHENE, AND BENZO(E)PYRENE IN WATER ARE, RESPECTIVELY, 5.3 + OR - 0.5 X 10 TO

THE -3RD POWER, 0.16 + OR - 0.02, 0.25 + OR -0.02, 0.69 + OR - 0.06, 0.20 + OR - 0.01, AND APPROXIMATELY 0.3 + OR - 0.1. WITH THE EXCEPTION OF PYRENE, OXYGEN QUENCHING OF THE FLUORESCENCE IN WATER IS AT MOST 30%. THE FLUORESCENCE CONCENTRATION DEPENDENCE WAS MEASURED BY PHOTON COUNTING THE FLUORESCENCE INTENSITY RELATIVE TO THE EXCITATION LIGHT INTENSITY. ALL THE PAH FLUORESCENCES EXHIBITED A LINEAR DEPENDENCY ON THE CONCENTRATION. FOR A FLUORESCENCE SIGNAL-TO-NOISE RATIO OF 1, THE DETECTION LIMITS ARE AS FOLLOWS: NAPHTHALENE, 0.03 MICROGRAMS/L. ANTHRACENE, 0.03 MICROGRAMS/L. PYRENE, 0.15 MICROGRAMS/L. FLUORANTHENE, 0.17 MICROGRAMS/L. AND BENZO(E)PYRENE, 0.10 MICROGRAMS/L.

MJ EMISSION-SPECTRA, BENZENE, NAPTHALENE, ANTHRACENE, PYRENES.
MN FLUORINE-AROMATIC-COMPOUNDS, POLYCYCLIC-AROMATIC-HYDROCARBONS, SOLUTIONS, POLYCYCLIC-COMPOUNDS, CONCENTRATION-COMPOSITION, QUANTUM-EFFICIENCY, CARCINOGENS.
ID REPRINTS, FLUORANTHENES, BENZOPYRENES, NTISCOMNBS.
AN N PB-252 797/6SL.

<1052>

AU SCHWARZ, F P. WASIK, S P.
IN USDC, NATIONAL BUREAU OF STANDARDS, INST. FOR MATERIALS RESEARCH, CONNECTICUT AVE. AT VANNESS ST. NW, WASH. DC 20234.
YR 76.
TI FLUORESCENCE MEASUREMENTS OF BENZENE, NAPHTHALENE, ANTHRACENE, PYRENE, FLUORANTHENE, AND BENZO (E) PYRENE IN WATER.
SO ANALYTICAL CHEMISTRY, 48(3): 524-528, MAR. 1976.
LG EN.
AB NONE.
ID SPECTROFLUORIMETRY.
DE ABSORPTION SPECTROSCOPY, AROMATIC COMPOUNDS, LUMINESCENCE, HYDROCARBONS, WATER POLLUTION.
AN P 7603235.

<1053>

AU SCHWARZ, FREDERICK P.
IN NATIONAL BUREAU OF STANDARDS, WASHINGTON, D.C. 240 800.
YR 77. 5P.
TI DETERMINATION OF TEMPERATURE DEPENDENCE OF SOLUBILITIES OF POLYCYCLIC AROMATIC HYDROCARBONS IN AQUEOUS SOLUTIONS BY A FLUORESCENCE METHOD.
NT FINAL REPT.
AV PUB. IN J. CHEM. ENG. DATA, V22 N3 P273-277 JUL 77.
PR NOT AVAILABLE NTIS.
AB THE FLUORESCENCE INTENSITIES OF SATURATED AQUEOUS POLYCYCLIC AROMATIC HYDROCARBON (PAH) SOLUTIONS EQUILIBRATED AT TEMPERATURES BETWEEN 281 AND 303 K ARE PROPORTIONAL TO THE PAH CONCENTRATION. THE FLUORESCENCE MEASUREMENTS ARE PUT ON AN ABSOLUTE SOLUBILITY SCALE BY UV ABSORPTION MEASUREMENTS AT 298.2 K. THIS METHOD WAS APPLIED TO THE DETERMINATION OF THE SOLUBILITIES OF NAPHTHALENE, 1-METHYLNAPHTHALENE, 1-ETHYLNAPHTHALENE, PHENANTHRENE, ANTHRACENE, PYRENE, AND BENZ(E)PYRENE IN WATER AND IN 0.5 MOL/L SODIUM CHLORIDE SOLUTION. ENTHALPIES OF SOLUTION OF THE PAH WERE CALCULATED.
MJ HEAT-OF-SOLUTION, AROMATIC-POLYCYCLIC-HYDROCARBONS, SOLUBILITY.
MN FLUORESCENCE, ENTHALPY, TEMPERATURE, NAPHTHALENE, ANTHRACENE, PHENANTHRENE, PYRENES.
ID REPRINTS, NAPTHALENE-METHYL, NAPTHALENE-ETHYL, BENZ-EPYRENE, NTISCOMNBS.
AN N PB-271 169/5ST.

<1054>

AU SCHWARZ, FREDERICK P. WASIK, STANLEY P.
IN NATIONAL BUREAU OF STANDARDS, WASHINGTON, D.C. 401 937.
YR 76. 7P.
TI FLUORESCENCE MEASUREMENTS OF CARCINOGENIC AND POLYCYCLIC AROMATIC HYDROCARBONS IN WATER.
NT FINAL REPT. PUB. IN PROCEEDINGS OF INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SENSING AND ASSESSMENT, LAS VEGAS, NEV. SEP 14-19, 1975, PAPER IN INTERNATIONAL CONFERENCE ON ENVIRONMENTAL SENSING AND ASSESSMENT, V2 SESSION 30-2, P1-5 1976.
PR PC$3.50/MF$2.25.
AB THE APPLICATION OF SPECTROFLUORIMETRY TO THE MEASUREMENT AND IDENTIFICATION OF POLYCYCLIC AROMATIC HYDROCARBONS

(PAH) IN AQUEOUS SOLUTIONS WAS INVESTIGATED. AT NAPERIAN ABSORBANCES < OR = TO 0.05, THE FLUORESCENCE INTENSITIES OF SOLUTIONS CONTAINING NAPHTHALENE, ANTHRACENE, PYRENE, AND FLUORANTHENE IN WATER ARE A SUPERPOSITION OF THE COMPONENT FLUORESCENCE SPECTRA. AT THE HIGHER PAH OPTICAL DENSITIES OF THE MG/L LEVEL AND WHEN VIEWED PERPENDICULAR TO THE EXCITATION LIGHT, THE FLUORESCENCE SPECTRA VARY UNPREDICTABLY WITH THE CONCENTRATION. THE PAH FLUORESCENCE INTENSITY IS UNAFFECTED BY THE PRESENCE OF SODIUM CHLORIDE AT SEA WATER CONCENTRATIONS AND BY THE PRESENCE OF MG/L CONCENTRATIONS OF IRON, ZINC, COBALT, OR NICKEL CATIONS IN THE WATER.
MJ AROMATIC-POLYCYCLIC- HYDROCARBONS, CARCINOGENS, WATER- ANALYSIS.
MN SOLUTIONS, FLUORESCENCE, EXPERIMENTAL-DESIGN, CONCENTRATION-COMPOSITION, MEETINGS.
ID FLUOROMETRIC-ANALYSIS, WATER-POLLUTION-DETECTION, NTISCOMNBS.
AN N PB-252 734/9SL.

<1055>
AU SCHWARZ, J. R. WALKER, J. D. COLWELL, R. R.
IN DEP. MICROBIOL. UNIV. MARYLAND. COLLEGE PARK. MD.
YR 75.
TI DEEP-SEA BACTERIA. GROWTH AND UTILIZATION OF N-HEXADECANE AT IN SITU TEMPERATURE AND PRESSURE.
SO CAN. J. MICROBIOL. 21. P682-7. 1975.
LG EN.
DE HEXADECANE BACTERIA PRESSURE.
AN C 08305040008.

<1056>
AU SCOTT C C L. FINNERTY W R.
YR 76.
TI A COMPARATIVE ANALYSIS OF THE ULTRASTRUCTURE OF HYDRO CARBON OXIDIZING MICROORGANISMS.
SO J GEN MICROBIOL. 94 (2). 342-350.
DE BACTERIA FUNGI GROWTH INTRA CELLULAR ELECTRON TRANSPARENT INCLUSIONS MEMBRANE POLY-BETA HYDROXY BUTYRIC-ACID.
AN B 63027435.

<1057>
AU SCOTT, C. D. HANCHER, C. W. HOLLADAY, D. W. DINSMORE, G. B.
IN OAK RIDGE NATIONAL LAB. TENN. 4832000.
YR 75. 16P.
TI TAPERED FLUIDIZED-BED BIOREACTOR FOR TREATMENT OF AQUEOUS EFFLUENTS FROM COAL CONVERSION PROCESSES.
PR PC$3.50/MF$2.25.
AB A BIOREACTOR SYSTEM BASED ON A TAPERED FLUIDIZED BED IS UNDER DEVELOPMENT FOR THE MICROBIOLOGICAL DEGRADATION OF HAZARDOUS ORGANIC COMPOUNDS EXPECTED IN AQUEOUS EFFLUENT WASTE STREAMS FROM COAL CONVERSION PROCESSES. THE CONCEPT WILL BE USED WITH FLUIDIZED PARTICLES HAVING ADHERING MICROORGANISMS. THE USE OF A FLUIDIZED REACTION MEDIUM ALLEVIATES OPERATIONAL PROBLEMS ASSOCIATED WITH BIOMASS BUILDUP AND ALLOWS EASY REMOVAL OR ADDITION OF THE ACTIVE MATERIALS. THE TAPERED REACTOR TENDS TO STABILIZE THE FLUIDIZED BED WHILE ALLOWING A MUCH WIDER RANGE OF OPERATING CONDITIONS. PRELIMINARY EXPERIMENTAL RESULTS FROM A STUDY MADE WITH A 3-IN. -DIAM TAPERED FLUIDIZED-BED REACTOR THAT CONTAINED ADHERING PSEUDOMONAS BACTERIA AND OPERATED AEROBICALLY INDICATE THAT THE PHENOL CONTENT OF A FEED STREAM CAN BE REDUCED TO LESS THAN 25 PPB. THIS CONCEPT IS COMPATIBLE WITH MULTISTAGE OPERATION, AND SCALE-UP IS CONSIDERED PRACTICAL.
MJ CHEMICAL-REACTORS, DESIGN, BIODEGRADATION, FLUIDIZED-BED.
MN EQUIPMENT, PSEUDOMONAS, WASTE-PROCESSING.
ID ERDA-010800WATER-POLLUTION- CONTROL, INDUSTRIAL-WASTE- TREATMENT, BACTERIA, PHENOLS, NTISERDA.
AN N CONF-751215-2.

<1058>
AU SDIKA, A. CABRIDENC, R.
IN SERV. EAU-BIOL.-FERMENT. INST. RECH. CHIM. APPL. VERT-LE-PETIT. FR.
YR 76.
TI ANALYTICAL STUDIES ON THE ORGANIC MICROPOLLUTION OF WATER.
SO J. FR. HYDROL. 7. P95-100. 1976.
LG FR.
DE ORG POLLUTANT DETN WATER. PHENOL DETN WATER. CHLORINATED HYDROCARBON DETN WATER. INDOLE DETN WATER. MERCURY ORG DETN WATER. AMINE DETN WATER. ESTROGEN DETN WATER. NITROSOAMINE DETN WATER.

AN C 08706043997.

<1059>
AU SEE C L. BUIKEMA A L JR. CAIRNS J JR.
YR 74.
TI THE EFFECTS OF SELECTED TOXICANTS ON SURVIVAL OF DUGESIA- TIGRINA TURBELLARIA.
SO ASB (ASSOC SOUTHEAST BIOL) BULL. 21 (2). 82.
DE ABSTRACT MERCURY CHROMIUM COPPER ZINC NICKEL LEAD CHLORDANE ALKYL BENZENESULFONATE PHENOL CYANIDE WATER POLLUTANTS.
AN B 75074552.

<1060>
AU SEIBER, J. N. CROSBY, D. G. FOUDA, H. SODERQUIST, C. J.
IN DEP. ENVIRON. TOXICOL. UNIV. CALIFORNIA. DAVIS. CALIF.
YR 72.
TI ETHER DERIVATIVES FOR THE DETERMINATION OF PHENOLS AND PHENOL-GENERATING PESTICIDES BY ELECTRON-CAPTURE GAS CHROMATOGRAPHY.
SO J. CHROMATOGR. 73. P89-97. 1972.
LG EN.
DE GAS CHROMATOG PHENOL PESTICIDE. ETHER DERIVATIZATION GAS CHROMATOG. WATER PESTICIDE GAS CHROMATOG.
AN C 07807039084.

<1061>
AU SEILER J P.
YR 75.
TI TOXICOLOGY AND GENETIC EFFECTS OF BENZIMIDAZOLE COMPOUNDS.
SO MUTAT RES. 32 (2). (RECD 1976) 151-168.
DE BACTERIA FUNGUS HUMAN ANTI MITOTIC ACTIVITY.
AN B 62014033.

<1062>
AU SEKI H.
YR 75.
TI THERMAL STRESS FOR HEXA DECANE DECOMPOSITION IN SEA WATER OF A NATURAL ENVIRONMENT.
SO MER (TOKYO). 13 (2). 53-57.
DE MICROORGANISMS JAPAN WATER POLLUTION SELF PURIFICATION.
AN B 61045651.

<1063>
AU SEKI H.
YR 74.
TI HEXA DECANE DECOMPOSITION IN THE EUTROPHIC BAY OF SHIMODA JAPAN AT SUMMER STAGNATION PERIOD.
SO MER (TOKYO). 12 (4). (RECD 1975) 186-191.
DE BACTERIA TOKYO BAY WATER POLLUTION SELF PURIFICATION.
AN B 61045643.

<1064>
AU SEKI H.
IN OCEAN RESEARCH INSTITUTE, UNIVERSITY OF TOKYO, MINAMI-DAI 1- 15-1, NAKANO-KU, TOKYO, JAPAN.
YR 76.
TI METHOD FOR ESTIMATING THE DECOMPOSITION OF HEXADECANE IN THE MARINE ENVIRONMENT.
SO APPL ENVIRON MICROBIOL. 31. 3. P439-41. MAR 76.
LG EN.
MJ ALKANES: ME.
MN BACTERIA: IP. JAPAN.
AN M 76230255. 7610.

<1065>
AU SEMENOVA L M.
YR 72.
TI TOXIC EFFECT OF PHENOL ON ZOO PLANKTON IN TANKS.
SO BIOL VNUTR VOD INF BYULL. (15). 21-25.
DE CLADOCERA ROTIFER CRUSTACEA DECOMPOSING MICROORGANISMS.
AN B 57030449.

<1066>
AU SEMOV, V. ANDREEVA, L.
YR 72. 7P.
TI MICROBIAL DEGRADATION OF PHENOLS IN THE PURIFICATION OF PHENOLIC WASTE WATERS WITH ACTIVATED SLUDGE.
AV TRANSLATED FROM TR. NAUCHNOIZSLED. INST. VODOSNABDYAVANE, KANALIZ. SANIT. TEKH.
PR PC$3.50/MF$2.25.
AB LABORATORY INVESTIGATIONS ON THE PURIFICATION OF PHENOL WASTE WATERS IN THE COKE CHEMICAL PLANT IN KREMIKOVZI, TOGETHER WITH DOMESTIC SEWAGE HAVE BEEN CARRIED OUT. IN THE PROCESS OF THE GRADUAL CHARGING OF THE ACTIVATED SLUDGE TANKS WITH PHENOL WATER THE CAPABILITY OF MICROORGANISMS OF ACTIVATED SLUDGE

TO DEGRADATE THE DIFFERENT PHENOL COMPONENTS AS MONOVALENT OR BIVALENT PHENOLS HAS BEEN INVESTIGATED. IT HAS BEEN ESTABLISHED THAT THE MOST EASILY DEGRADATED BIOLOGICALLY WERE THE PHENOL AND THE PYROCATECHOL. THE O- CRESOL AND THE RESORCINOL WERE COMPARATIVELY LESS ACCESSIBLE TO BE DECOMPOSED BY MICROORGANISMS BUT THE QUINOL WAS DECOMPOSED WITH DIFFICULTY OR NOT ALL.
MJ PHENOLS, DECOMPOSITION.
MN MICROORGANISMS, PURIFICATION.
ID ERDA-400300, ERDA-520200, INDUSTRIAL-WASTE-TREATMENT, WATER-POLLUTION-CONTROL, NTISERDA.
AN N ORNL-TR-2983.

<1067>

AU SEN GUPTA, MRS. P. MONDAL, A. MITRA, S. N.
IN CENT. FOOD LAB. CALCUTTA. INDIA.
YR 72.
TI SEPARATION AND QUANTITATIVE ESTIMATION OF DIMETHYLAMINE AND TRIMETHYLAMINE IN FISH BY PAPER CHROMATOGRAPHY.
SO J. INST. CHEM. CALCUTTA. 44. P49-50. 1972.
LG EN.
DE METHYLAMINE FISH CHROMATOG.
AN C 07713086695.

<1068>

AU SESTOKAS, J. CUKERZIS, J.
IN INST. ZOOL. PARAZITOL. VILNIUS. USSR.
YR 73.
TI EFFECT OF PHENOL ON CRAYFISH.
SO BIOL. ISSLED. VNUTR. VODOEMAKH PRIBALTIKI, TR. NAUCHN. KONF. IZUCH. VNUTR. VODOEMOV PRIBALTIKI, 15TH. P120-1. 1973.
LG RS.
AV PETROVICH, P. G. ZHUKOV, P. I. KOKHNENKO, S. V.
DE PHENOL TOXICITY CRAYFISH. WATER OXYGEN PHENOL CRAYFISH.
AN C 08319158655.

<1069>

AU SFORZOLINI, G. S. SAVINO, A. MONARCA, S.
YR 74. 19P.
TI DECONTAMINATION OF WATER CONTAMINATED WITH POLYCYCLIC AROMATIC HYDROCARBONS (PAH). II. ACTION OF CHLORINE AND OZONE ON PAH DISSOLVED IN DRINKING AND RIVER WATER.
AV TRANSLATION.
PR PC$3.50/MF$2.25.
AB EFFECTS OF CHLORINE AND OZONE ON POLYCYCLIC AROMATIC HYDROCARBONS (PAH) IN DRINKING WATER AND RIVER WATER WERE STUDIED. REACTIONS BETWEEN OXIDIZING AGENTS AND OTHER CHEMICAL SUBSTANCES IN THE TWO KINDS OF WATER WERE ALSO STUDIED. OZONE-ENRICHED AIR IN A CONCENTRATION OF 0.40 MG/L EXERTED A STRONGER EFFECT ON THE PAH THAN CHLORINE IN WATER IN A CONCENTRATION OF 2 MG/L. THE HYDROCARBON MOST SENSITIVE TO THE ACTION OF OXIDIZING AGENTS WAS 3,4-BENZOPYRENE; THE LEAST SENSITIVE WAS 3,4-BENZOFLUORANTHENE. THE VARIABILITY OF RESULTS OF INDIVIDUAL TESTS WAS HIGH IN RIVER WATER AND IN DE-IONIZED WATER, LOW OR ZERO IN DOUBLY DISTILLED WATER AND IN DRINKING WATER. WITH PYRENE AND 3,4-BENZOPYRENE DISSOLVED IN DOUBLY DISTILLED WATER AND IN DE-IONIZED WATER, IN TREATMENTS WITH CHLORINE THERE WERE OBSERVED SPECTROPHOTOMETRICALLY NEW PEAKS IN THE UV AND IN THE LOW VISIBLE.
MJ DRINKING-WATER, DECONTAMINATION, SURFACE-WATERS, DECONTAMINATION, OZONE, CHEMICAL-REACTIONS, HYDROCARBONS, CHEMICAL-REACTIONS.
MN AROMATICS, BENZOPYRENE, CHLORINE, OXIDATION, PYRENE.
ID ERDA-520200, TRANSLATIONS, AROMATIC-POLYCYCLIC-HYDROCARBONS, CHLORINATION, OZONIZATION, NTISERDA.
AN N ORNL-TR-2961.

<1070>

AU SFORZOLINI, G. S. SAVINO, A. MONARCA, S. LOLLINI, M. N.
YR 74. 19P.
TI DECONTAMINATION OF WATER CONTAMINATED WITH POLYCYCLIC AROMATIC HYDROCARBONS (PAH). I. ACTION OF CHLORINE AND OZONE ON PAH DISSOLVED IN DOUBLY DISTILLED AND IN DE-IONIZED WATER.
AV TRANSLATED BY MARTHA GERRARD FROM.
PR PC$3.50/MF$2.25.
AB THE ACTION OF CHLORINE AND OZONE ON SOME POLYNUCLEAR AROMATIC HYDROCARBONS (PAH) DISSOLVED IN BIDISTILLED WATER AND IN DEIONIZED WATER WAS STUDIED AS A PART OF A LARGER STUDY ON THE DECONTAMINATION OF POLLUTED WATERS BY CARCINOGENIC

HYDROCARBONS. THE PAH EXAMINED ARE: PYRENE; 1,2-BENZANTHRACENE; 3,4-BENZAPYRENE; 3,4-BENZAFLUORANTHANE; 11,12-BENZAFLUORANTHENE. THE CHLORIDE--WATER WAS USED WITH A CL SUB 2 CONCENTRATION OF 2 + OR - 0.25 MG/1 AND THE OZONE-ENRICHED AIR IN A O SUB 3 CONCENTRATION OF 0.40 + OR - 0.05 MG/1, BOTH FOR A CONTACT PERIOD OF 30 MIN. ALL THE PAH UNDER STUDY WERE EXPOSED TO THE OXIDIZING ACTION OF CL SUB 2 AND O SUB 3 .THE 3,4-BENZAPYRENE WAS THE MOST SENSITIVE TO THE ACTION OF THE OXIDIZING AGENTS AND REGULARLY SHOWED A DECREASE OF 100 PERCENT OF ITS ORIGINAL CONTENT. THE ACTION EXERTED BY O SUB 3 (AT A CONCENTRATION 5 TIMES LOWER THAN THAT OF CL SUB 2) WAS STRONGER THAN THAT EXERTED BY THE CL SUB 3 FOR THE SAME CONTACT PERIOD AND WAS MORE COMPLETE AS IS INDICATED BY THE ABSENCE OF NEW COMPOUNDS. ON THE CONTRARY THE REACTION OF CL SUB 2 WITH PYRENE AND 3,4-BENZAPYRENE PRODUCED CHLORINE DERIVATES. IN DEIONIZED WATER AND WHEN TREATED WITH CL SUB 2, THE PERCENTAGE DECREASE OBSERVED VARIED IN EACH TEST. THE STANDARD DEVIATIONS AND CONFIDENCE INTERVALS OF THE AVERAGE VALUES WERE ALWAYS RATHER LARGE FOR ALL HYDROCARBONS WITH THE EXCEPTION OF 3,4-BENZAPYRENE. RESULTS INDICATE THE PRESENCE OF TRACES OF MINERAL ELEMENTS IN THE WATER, INTERFERRING IN THE REACTIONS BETWEEN CL SUB 2 AND THE HYDROCARBONS BUT NOT BETWEEN O SUB 3 AND THE HYDROCARBONS.

MJ BENZOPYRENE, REMOVAL, BENZANTHRACENE, REMOVAL, AROMATICS, REMOVAL, ORGANIC-FLUORINE-COMPOUNDS, REMOVAL.

MN CHEMICAL-REACTIONS, CHLORINE, ORGANIC-CHLORINE-COMPOUNDS, OZONE, PURIFICATION, WATER, WATER-POLLUTION.

ID ERDA-400105, ERDA-520200, WATER-POLLUTION-CONTROL, AROMATIC-POLYCYCLIC-HYDROCARBONS, OZONIZATION, CHLORINATION, NTISERDA .

AN N ORNL-TR-2960.

<1071>

AU SHABAD L M. IL'NITSKII A P.

YR 76.

TI RESULTS OF DISCUSSIONS ON THE HYGIENIC STANDARDIZATION OF CARCINOGENIC SUBSTANCES.

SO GIG SANIT. (5). 91-93.

DE HUMAN ANIMAL BENZO PYRENE N NITROSO COMPOUNDS AFLA TOXINS CARCINOGENS AIR WATER SOIL POLLUTION FOOD CONTAMINATION MAXIMUM ALLOWABLE CONCENTRATION.

AN B 63052531.

<1072>

AU SHABAD L M. IL'NITSKII A P.

YR 75.

TI POSSIBILITY OF ESTABLISHING THE PERMISSIBLE LEVEL OF BENZO A PYRENE IN SOIL.

SO GIG SANIT. (4). 88-91.

DE HUMAN FOOD PLANTS ANIMALS WATER CARCINOGEN DUST MAXIMUM ALLOWABLE CONCENTRATION.

AN B 61052350.

<1073>

AU SHABAD, L. M.

IN DEP. CARCINOG. AGENTS. INST. EXP. CLIN. ONCOL. MOSCOW. USSR.

YR 75.

TI CIRCULATION OF CARCINOGENIC SUBSTANCES IN THE ENVIRONMENT. FROM LABORATORY EXPERIMENTS TO FIELD INVESTIGATIONS.

SO GANN MONOGR. CANCER RES. 17. P179-87. 1975.

LG EN.

DE CARCINOGENIC POLYCYCLIC AROM HYDROCARBON. BENZOPYRENE AIR POLLUTION. SOIL POLLUTION POLYCYCLIC HYDROCARBON. WATER POLLUTION POLYCYCLIC HYDROCARBON.

AN C 08420140038.

<1074>

AU SHABAD, L. M. IL'NITSKII, A. P.

IN USSR.

YR 72.

TI CONTAMINATION OF RESERVOIRS BY CARCINOGENIC HYDROCARBONS.

SO VOP. PROFIL. ZAGRYAZNENIYA VHNESH. SREDY. CHASTNOSTI VODOEMOV, KANTSEROGEN. VESHCHESTV. P5-13. 1972.

LG RS.

DE BENZOPYRENE POLLUTION WATER. NITROSAMINE POLLUTION WATER. WATER POLLUTION BENZOPYRENE NITROSAMINE.

AN C 07902009557.

<1075>
AU SHABAD, L. M. IL'NITSKII, A. P.
IN INST. EKSP. KLIN. ONKOL. MOSCOW. USSR.
YR 72.
TI POLLUTION OF RESERVOIRS WITH CARCINOGENIC HYDROCARBONS AND SUBSEQUENT FATE OF THESE SUBSTANCES.
SO VESTN. AKAD. MED. NAUK SSSR. 27. P35-42. 1972.
LG RS.
DE CARCINOGEN RESERVOIR WATER. BENZOPYRENE RESERVOIR WATER.
AN C 07703015314.

<1076>
AU SHAH, MUKUND JETHALAL.
IN THE GEORGE WASHINGTON UNIVERSITY (0075) PH.D. 1970 178PP.
YR 70.
TI CHROMATOGRAPHIC AND SPECTROSCOPIC STUDIES OF THE OXIDATION PRODUCTS OF PARA- PHENYLENEDIAMINE AND RESORCINOL.
SO DAI V31(04), SEC B, P1841.
DE CHEMISTRY, ORGANIC (0490).
AN D ADG70-19580.

<1077>
AU SHARMA, PREM KISHORE. PRASAD, BADRI.
IN PHYS. DEP. UNIV. ALLAHABAD. ALLAHABAD. INDIA.
YR 69.
TI SONOCHEMICAL OXIDATION OF AQUEOUS HYDROQUINONE SOLUTION.
SO J. PRAKT. CHEM. 311. P881-3. 1969.
LG EN.
DE KINETICS SONOCHEM OXIDN HYDROQUINONES. SONOCHEM OXIDN HYDROQUINONES KINETICS. OXIDN SONOCHEM KINETICS HYDROQUINONES. HYDROQUINONES KINETICS SONOCHEM OXIDN. BENZOQUINONES HYDROQUINONES OXIDN.
AN C 07213066162.

<1078>
AU SHEFTEL V O. TSAM Z S. KALINICHENKO L T.
YR 74.
TI HYGIENIC EVALUATION OF EPOXY COMPOSITIONS INTENDED FOR USE IN WATER SUPPLY.
SO GIG SANIT. (12). (RECD 1975) 81- 82.
DE RAT MOUSE EPI CHLOROHYDRIN POLY ETHYLENE POLY AMINE DI PHENYLOL PROPANE DI BUTYL PHTHALATE ACETONE MAXIMUM ALLOWABLE CONCENTRATION.
AN B 60046384.

<1079>
AU SHELYUG, M. YA. KOSTOVETSKII, YA. I. VROCHINSKII, K. K. LOSHAKOV, YU. T. LAKIZA, P. I. YAROSHEVSKII, B. N. KALYUZHNAYA, L. D. ZHOLDAKOVA, Z. I. CHERNICHENKO, I. A.
IN KIEV. USSR.
YR 71.
TI HYGIENIC PROBLEMS OF STANDARDIZING CHEMICAL SUBSTANCES IN THE ENVIRONMENT.
SO TR. S'EZDA GIG. UKR. SSR, 8TH. P59-62. 1971.
LG RS.
AV MEDVED, L. I.
DE REVIEW SOIL WATER TOXICITY STD. PESTICIDE SOIL WATER REVIEW. PHENOL SOIL WATER REVIEW. ECOL TOXIC CHEM ACCUMULATION REVIEW. FOOD TOXICANT ENVIRONMENT REVIEW.
AN C 07706038670.

<1080>
AU SHEVLYAGIN, V. N. SLYUSARENKO, P. K.
IN USSR.
YR 73.
TI EXTRACTION OF PHENOL FROM AQUEOUS SOLUTIONS WITH ANTHRACENE OIL.
SO SB. NAUCHN. TR. MAGNITOGORSK. GORNOMETALL. INST. NO. 122. P54-6. 1973 .
LG RS.
DE PHENOL EXTN ANTHRACENE OIL.
AN C 08122141678.

<1081>
AU SHEVLYAGIN, V. N. SLYUSARENKO, P. K.
IN USSR.
YR 72.
TI EXTRACTION OF PHENOL FROM AQUEOUS SOLUTIONS WITH ANTHRACENE OIL.
SO SB. NAUCH. TR. MAGNITOGORSK. GORNOMET. INST. NO. 104. P3-8. 1972.
LG RS.
DE PHENOL REMOVAL WASTE WATER. ANTHRACENE EXTN PHENOL.
AN C 07824151248.

<1082>
AU SHIBAEVA, L. V. METELITSA, D. I. DENISOV, E. T.

IN FILIAL INST. KHIM. FIZ. CHERNOGOLOVKA. USSR.
YR 69.
TI OXIDATION OF PHENOL BY MOLECULAR OXYGEN IN AQUEOUS SOLUTIONS. II. ROLE OF HYDROGEN PEROXIDE IN THE OXYGEN OXIDATION OF PHENOL.
SO KINET. KATAL. 10. P1239-43. 1969.
LG RS.
DE PHENOL OXIDN KINETICS. OXIDN KINETICS PHENOL. KINETICS OXIDN PHENOL.
AN C 07215078223.

<1083>
AU SHIBAEVA, L. V. METELITSA, D. I. DENISOV, E. T.
IN FILIAL INST. KHIM. FIZ. CHERNOGOLOVKA. USSR.
YR 69.
TI OXIDATION OF PHENOL BY MOLECULAR OXYGEN IN AQUEOUS SOLUTIONS. I. KINETICS OF THE OXYGEN OXIDATION OF PHENOL.
SO KINET. KATAL. 10. P1020-5. 1969.
LG RS.
DE PHENOLS O OXIDN KINETICS. KINETICS O OXIDN PHENOLS.
AN C 07205021143.

<1084>
AU SHIMIZU T. FUKETA Y. TAGUCHI H.
YR 69.
TI MICROBIAL TREATMENT OF INDUSTRIAL WASTES CONTAINING CYANIDE PART 5 KINETIC STUDIES ON CYANIDE DEGRADATION REACTION BY FUSARIUM-SOLANI.
SO J FERMENT TECHNOL. 47 (10). 644-650.
AN B 51045383.

<1085>
AU SHIMIZU T. TAGUCHI H.
YR 70.
TI MICROBIAL TREATMENT OF INDUSTRIAL WASTE CONTAINING CYANIDE PART 6 ADAPTIVE FORMATION OF CYANIDE DEGRADING ENZYME OF FUSARIUM-SOLANI.
SO J FERMENT TECHNOL. 48 (5). 277- 282.
DE KINETIC MODEL.
AN B 52139189.

<1086>
AU SHIMIZU T. TAGUCHI H.
YR 69.
TI MICROBIAL TREATMENT OF INDUSTRIAL WASTES CONTAINING CYANIDE PART 4 PURIFICATION AND SOME PROPERTIES OF CYANIDE DEGRADING ENZYME OF FUSARIUM-SOLANI.
SO J FERMENT TECHNOL. 47 (10). 639-643.
AN B 51068726.

<1087>
AU SHINOZUKA, FUJIKO.
IN THE UNIVERSITY OF CONNECTICUT (0056) PH.D. 1962 156PP.
YR 62.
TI THE MICRODETERMINATION OF CYANIDE, ESPECIALLY BY VOLTAMMETRIC AND AMPEROMETRIC TECHNIQUES.
SO DAI V23(05) P1503.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG62-04396.

<1088>
AU SHIRINKINA, M. I.
IN PERM. POLITEKH. INST. PERM. USSR.
YR 73.
TI 3,4-BENZOPYRENE POLLUTION OF WASTE WATERS FROM THE 23RD-PARTY- CONGRESS PERM PETROLEUM REFINERY.
SO NAUCHN. TR. PERMSK. POLITEKH. INST. 141. P18-20. 1973.
LG RS.
DE BENZOPYRENE PETROLEUM WASTEWATER.
AN C 08306047771.

<1089>
AU SHKODICH, P. E. TIKHOMIROV, YU. P.
IN GOR'K. MED. INST. GORKI. USSR.
YR 73.
TI SOME ORGANIC SYNTHESIS INDUSTRIES AS SOURCES OF RESERVOIR POLLUTION BY CARCINOGENIC HYDROCARBONS.
SO VOPR. GIG. VODOSNABZH. SANIT. OKHR. VODOEMOV, MATER. RESP. NAUCHNO-PRAKT. KONF. P68. 1973.
LG RS.
AV AKULOV, K. I.
DE BENZOPYRENE PETROLEUM PYROLYSIS WASTEWATER. COKE PETROLEUM WASTEWATER BENZOPYRENE. CARCINOGEN WASTEWATER PETROLEUM PYROLYSIS. WATER POLLUTION PETROLEUM PYROLYSIS.
AN C 08606033753.

<1090>
AU SHMAL'GAUZEN O I.
TI EFFECT OF PHENOL ON DEVELOPMENT OF THE PRO LARVAE OF ACIPENSERID FISH PART 2 THE DIGESTIVE SYSTEM.

SO SOV J DEV BIOL (ENGL TRANSL ONTOGENEZ). 3 (5). 1972 (1973) 407-413.
DE ACIPENSER-GULDENSTADTI COLCHICUS POISONING FAT METABOLISM.
AN B 74100223.

<1091>
AU SHMAL'GAUZEN O I.
TI EFFECT OF PHENOL ON DEVELOPMENT OF PROLARVAE OF ACIPENSERID FISH PART 3 PIGMENTATION OF THE SKIN STRUCTURE OF THE EYES.
SO SOV J DEV BIOL (ENGL TRANSL ONTOGENEZ). 4 (1). 1973 (1974) 28-35.
DE STURGEON MELANIN FORMATION INHIBITION PATHOLOGICAL RETINAL CHANGES.
AN B 74043746.

<1092>
AU SHMAL'GAUZEN O I.
YR 71.
TI EFFECT OF PHENOL ON PRE LARVAL DEVELOPMENT OF STURGEONS PART 1 EXTERNAL STRUCTURE AND BEHAVIOR.
SO ONTOGENEZ. 2 (6). 603-610.
DE ACIPENSER-GULDENSTADTI-COLCHICUS ACIPENSER-STELLATUS SENSE ORGAN SKELETON MUSCLE DIGESTIVE SYSTEM MALFORMATION DEVELOPMENT DELAY PIGMENTATION FAT METABOLISM.
AN B 53065543.

<1093>
AU SHMIDT, L. I.
IN NAUCH.-ISSLED. PROEKT. INST. POLIM. PLASTMASS. LENINGRAD. USSR.
YR 70.
TI LIQUID-PHASE OXIDATION OF WASTE-WATER PHENOL AT HIGH TEMPERATURES AND PRESSURES.
SO ZH. PRIKL. KHIM. (LENINGRAD). 43. P2123-5. 1970.
LG RS.
DE OXIDN PHENOL WASTE WATERS. PHENOL WASTE WATERS OXIDN. ACETIC ACID OXIDN WASTE WATERS.
AN C 07408034413.

<1094>
AU SHPON'KO, R. I. NIKITINA, N. I. NETTE, I. T.
IN USSR.
YR 69.
TI FORMATION AND USE OF KETO ACIDS BY MYCOBACTERIUM LACTICOLUM 80 ON A MEDIUM WITH N-DECANE.
SO VESTN. MOSK. UNIV. BIOL. POCHVOVED. 24. P106-9. 1969.
LG RS.
DE MYCOBACTERIUM DECANE FERMN. DECANE FERMN MYCOBACTERIUM. GROWTH FACTORS BACTERIA. BACTERIA GROWTH FACTORS.
AN C 07201001022.

<1095>
AU SHTEIN, A. L. DURNOVA, M. S. TRONDINA, G. I.
IN USSR.
YR 76.
TI STUDY OF NAPHTHALENE, AMMONIA, AND PYRIDINE EQUILIBRIUM AT LOW CONCENTRATIONS BETWEEN WATER AND AIR.
SO ZH. PRIKL. KHIM. (LENINGRAD). 49. P650-1. 1976.
LG RS.
DE NAPHTHALENE REMOVAL AIR. AMMONIA REMOVAL AIR. PYRIDINE REMOVAL AIR. COKE AIR PURIFN. WATER AIR EQUIL POLLUTANT.
AN C 08508051133.

<1096>
AU SHUKLA O P.
YR 70.
TI SPECIFICITY IN THE MICROBIAL DECOMPOSITION OF PYRIDINE DERIVATIVES.
SO PROC ABSTR SOC BIOL CHEM (INDIA). 29. 29-30.
DE ABSTRACT ARTHROBACTER CORYNEBACTERIUM BACILLUS ALPHA PICOLINE BETA PICOLINE GAMMA PICOLINE ALPHA PICOLINIC-ACID 2 6 LUTIDINE DEGRADATION.
AN B 72058695.

<1097>
AU SHULESHOV, E. I. PAPKOV, G. I. GRINSHPUN, V. E. SAMOILOV, A. L.
IN USSR.
YR 75.
TI DEPHENOLIZATION OF TAR WATER USING STANDARD EXTRACTION COLUMNS.
SO V SB. VOPR. TEKHNOL. ULAVLIVANIYA I PERERAB. PRODUKTOV KOKSOVANIYA, M. P43-9. 1975.
LG RS.
DE PHENOL REMOVAL TAR WATER. EXTN PHENOL TAR WATER.
AN C 08512080715.

<1098>
AU SHUSHUNOVA, A. F. SHKODICH, P. E. SHKANAKIN, N. G. LEMBIK, ZH. L.
IN GOR'K. GOS. UNIV. GORKI. USSR.
YR 75.
TI GAS-CHROMATOGRAPHIC DETERMINATION OF POLYCYCLIC AROMATIC HYDROCARBONS IN WASTE WATERS.
SO GIG. SANIT. P61-3. 1975.
LG RS.
DE POLYACENE DETN WASTEWATER. GAS CHROMATOG POLYACENE WASTEWATER. PHENANTHRENE DETN WASTEWATER. DIBENZANTHRACENE DETN WASTEWATER. BENZANTHRACENE DETN WASTEWATER. BENZPYRENE DETN WASTEWATER.
AN C 08420140326.

<1099>
AU SIDDIQI, I. WAGNER, K -H.
IN JUSTUS LIEBIG-UNIVERSITAET GIESSEN, INSTITUT FUER ERNAEHRUNGSWISSENSCHAFT II, GER.
YR 72.
TI EINE UNIVERSALE METHODE ZUR BESTIMMUNG VON 3,4-BENZPYREN UND 3,4-BENZFLUORANTHEN-AUSGEWERTET AN REGENWASSER, SICKERWASSER UND WEIZENPROBEN.
SO CHEMOSPHERE, 1(2): 83-88, MARCH 1972.
LG GE.
AB NONE.
ID DETERMINATION IN LIQUIDS, 3,4-BENZFLUORANTHEN, 3,4-BENZPYRENE.
DE CARCINOGENS, CHEMICAL ANALYSIS.
AN P 7006934.

<1100>
AU SIELICKI M. FOCHT D D.
YR 77.
TI STYRENE AND FOLY STYRENE DEGRADATION BY SOIL MICROORGANISMS.
SO ABSTR ANNU MEET AM SOC MICROBIOL. 77. 274.
DE ABSTRACT BACTERIA.
AN B 77049707.

<1101>
AU SIELICKI M. FOCHT D D. MARTIN J P.
IN DEPARTMENT OF SOIL AND ENVIRONMENTAL SCIENCE, UNIVERSITY OF CALIFORNIA, RIVERSIDE, CALIFORNIA.
YR 78.
TI MICROBIAL TRANSFORMATIONS OF STYRENE AND 14C STYRENE IN SOIL AND ENRICHMENT CULTURES.
SO APPL ENVIRON MICROBIOL. 35. 1. P124-8. JAN 78.
LG EN.
MJ BACTERIA: ME.
MN BIODEGRADATION. PHENETHYL- ALCOHOL: ME.
AN M 78101777. 7805.

<1102>
AU SIELICKI, MARGARETE.
IN UNIVERSITY OF CALIFORNIA, RIVERSIDE (0032) PH.D. 1977, 077PP.
YR 77.
TI MICROBIAL DEGRADATION OF STYRENE AND STYRENE POLYMERS.
SO DAI V38(09), SEC B, P4076.
DE MICROBIOLOGY (0410).
AN D ADG76-00848.

<1103>
AU SIKKA H C. MIYAZAKI S. LYNCH R S.
YR 75.
TI DEGRADATION OF CARBARYL AND 1 NAPHTHOL BY MARINE MICROORGANISMS.
SO BULL ENVIRON CONTAM TOXICOL. 13 (6). 666-672.
DE FLAVOBACTERIUM-SP BREVIBACTERIUM- SP SERRATIA-MARINA SPIRILLUM-SP CANDIDA-PARAPSILOSIS RHODOTORULA-GLUTINIS TRICHOSPORON-FERMENTANS ASPERGILLUS-FUMIGATUS CULCITALNA-ACHRASPORA HALOSPHAERIA-MEDIOSETIGERA HUMICOLA-ALOPALLONELLA INSECTICIDE.
AN B 75094928.

<1104>
AU SILVO, OLAVI E. J.
IN SUUNNITTELUKESKUS OY. HELSINKI. FINLAND.
YR 74.
TI ACUTE TOXICITY OF DIOCTYLPHTHALATE (DOP) TO RAINBOW TROUT (SALMO GAIRDNERI) AND ITS EFFECTS ON THE PHYTOPLANKTON AND OXYGEN CONTENT OF THE WATER.
SO SUOM. KALATALOUS. 47. P19-25. 1974.
LG FI.
DE PHTHALATE DIOCTYL TOXICITY TROUT. OXYGEN WATER DIOCTYL PHTHALATE. PHYTOPLANKTON DIOCTYL PHTHALATE.
AN C 08411069950.

<1105>
AU SIMONOV V A. NEKHOROSHEVA E V. ZAVOROVSKAYA N A.
YR 74.
TI USE OF IR SPECTROSCOPY FOR

DETERMINING ENVIRONMENTAL POLLUTANTS.
SO GIG SANIT. (10). 71-72.
DE REVIEW WASTE WATER AIR CARBOXYLIC ACIDS ALDEHYDES ALPHA METHYL STYRENE LINDANE DI BUTYL PHTHALATE TOLUENE DI ISO CYANATE CARBON TETRA CHLORIDE DI CHLORO ETHANE EXHAUST GASES OIL.
AN B 60016547.

<1106>

AU SIMONOV, A. I. CHERNYSHOV, V. I. LEBEDEVA, E. S. TAKUEV, YU. S.
IN GOS. OKEANOGR. INST. MOSCOW. USSR.
YR 75.
TI FREE RADICAL OXIDATION PROCESSES IN SEA WATER AND METHODS FOR MONITORING THEM.
SO MATER. VSES. SIMP. "OKEANOGR. ASPEKTY OKHR. VOD KHIM. ZAGRYAZ." 1ST . P140-5. 1975.
LG RS.
AV CHERNYSHOV, V. I.
DE SEAWATER DEGRDN PETROLEUM PHENOL MONITORING.
AN C 08622160897.

<1107>

AU SIMONOV, A. I. PAKHOMOVA, A. S. VELICHKEVICH, A. K. AFANAS'EVA, N. A.
IN USSR.
YR 70.
TI CHEMICAL POLLUTION OF COASTAL WATERS OF USSR SEAS.
SO TR. GOS. OKEANOGR. INST. NO. 98. P212-21. 1970.
LG RS.
DE COASTAL POLLUTION USSR SEAS. SEAS USSR COASTAL POLLUTION. USSR SEAS COASTAL POLLUTION. PETROLEUM PRODUCTS POLLUTION SEAS. PHENOLS POLLUTION SEAS. HEAVY METALS POLLUTION SEAS. NITRATES POLLUTION SEAS . NITRITES POLLUTION SEAS. PHOSPHATES POLLUTION SEAS.
AN C 07414067425.

<1108>

AU SINCLAIR N A. HERRING C M.
IN DEPARTMENT OF MICROBIOLOGY AND MEDICAL TECHNOLOGY, UNIVERSITY OF ARIZONA, TUCSON, ARIZONA.
YR 75.
TI ISOLATION OF PENICILLIUM CORYLOPHIUM DIERCKX FROM ACID MINE WATER AND ITS OPTIMAL GROWTH ON HYDROCARBONS AT ACID PH.
SO MYCOPATHOLOGIA. 57. 1. P19-22. 8 DEC 75.
LG EN.
MJ INDUSTRIAL-WASTE.
MN COPPER. HYDROGEN-ION- CONCENTRATION: (PH).
AN M 76100741.

<1109>

AU SINEL'NIKOV, V. E.
IN INST. BIOL. VNUTR. VOD. USSR.
YR 69.
TI EXPLANATION OF THE ROLE OF PEROXIDES IN THE OXIDATION OF PHENOL IN RESERVOIRS.
SO MATER. SOVESHCH. PROGNOZIROVANIYU SODERZH. BIOGENNYKH ELEM. ORG. VESHCHESTVA VODOKHRAN. P118-26. 1969.
LG RS.
AV DRACHEV, S. M.
DE PHENOLS OXIDIZABILITY RESERVOIR WATERS. HYDROGEN PEROXIDE RESERVOIR PHENOLS. COLOR INDEX RESERVOIR PHENOLS. PEROXIDE PHENOLS OXIDN RESERVOIR.
AN C 07422115630.

<1110>

AU SINEL'NIKOV, V. E. BREUSOV, N. G.
IN USSR.
YR 73.
TI FLUORESCENCE OF WATERS OF OPEN-WATER BODIES IN THE ULTRAVIOLET SPECTRAL REGION AND ITS USE FOR DETERMINATION OF PHENOLS.
SO TR. INST. BIOL. VNUTR. VOD. AKAD. NAUK SSSR. NO. 24. P212-17. 1973.
LG RS.
DE PHENOL DETN WATER FLUORESCENCE. WASTEWATER ANALYSIS PHENOL FLUORESCENCE.
AN C 08014074027.

<1111>

AU SINGH H D. LONSANE B K. BARUA P K. BARUAH J N. IYENGAR M S.
YR 74.
TI FORMATION OF SALICYLIC ACID FROM NAPHTHALENE BY MICROORGANISMS: PART II. FACTORS AFFECTING SALICYLIC ACID ACCUMULATION.
SO INDIAN J EXP BIOL. 12. 2. P162- 5. MAR 74.
LG EN.
MJ NAPHTHALENES: ME. (SALICYLIC- ACID).
MN CULTURE-MEDIA.
AN M 75059462.

<1112>
AU SINGH N. CHOJER S N. TANDON S P.
IN DEP. CHEM. ALLAHABAD UNIV. ALLAHABAD, U.P. INDIA.
YR 73.
TI EFFECT OF PYRIDINE TOLUENE AND CARBON DI SULFIDE ON THE GROWTH OF NITRIFYING BACTERIA IN OMELIANSKYS MEDIUM.
SO BALWANT VIDYAPEETH J AGRIC SCI RES. 15 (1-2). (1976) (RECD 1977) 122-128.
LG EN.
DE NITROSOMONAS SOIL STERILIZATION GROWTH.
AN B 65016920.

<1113>
AU SIZOVA, G. S. USOVA, E. P. ZNAMENSKAYA, A. P.
IN STATE SCI.-RES. DES. INST. NITROGEN IND. PROD. ORG. SYNTH. MOSCOW. USSR.
YR 77.
TI GAS CHROMATOGRAPHIC DETERMINATION OF FORMIC AND ACETIC ACIDS AND FORMALDEHYDE IN AQUEOUS SOLUTIONS.
SO ZH. ANAL. KHIM. 32. P1034-6. 1977.
LG RS.
DE GAS CHROMATOG BENZOIC ACID PRODN. ACETIC ACID DETN GAS CHROMATOG. FORMIC ACID DETN GAS CHROMATOG. FORMALDEHYDE DETN GAS CHROMATOG.
AN C 08718145394.

<1114>
AU SKIDMORE J F.
YR 74.
TI FACTORS AFFECTING THE TOXICITY OF POLLUTANTS TO FISH.
SO VET REC. 94. 20. P456-8. 18 MAY 74.
LG EN.
MJ FISHES.
MN ANIMAL. PHENOLS: TO. AN. SPECIES-SPECIFICITY. DRUG-ANTAGONISM.
AN M 74301671.

<1115>
AU SKOROKHODOVA V A. OVERCHENKO M B. DOBROLINSKAYA G M.
YR 76.
TI EFFECT OF SOME CATIONS AND ANIONS ON THE MICROBIOLOGICAL OXIDATION OF GLYCEROL TO DI OXY ACETONE BY BACTERIA ACETOBACTER- SUBOXYDANS.
SO PRIKL BIOKHIM MIKROBIOL. 12 (2). 265-268.
DE MINERAL PHOSPHATE CORN EXTRACT MEDIA.
AN B 62060138.

<1116>
AU SKRIABIN G K. GOLOVLEV E L.
YR 74.
TI CURRENT TRENDS IN THE MICROBIOLOGICAL TRANSFORMATION OF ORGANIC COMPOUNDS.
TR SOVREMENNYE TENDENTSII MIKROBIOLOGICHESKOI TRANSFORMATSII ORGANICHESKIKH SOEDINENII.
SO IZV AKAD NAUK SSSR BIOL. 3. P381-93. MAY-JUN 74.
LG RS.
MJ BACTERIA: ME.
MN ACRYLATES: PD. DICARBOXYLIC- ACIDS: BI. HYDROXYPROGESTERONE: BI. (20-HYDROXYPROGESTERONE). MUTATION. OXIDATION-REDUCTION. (PENICILLIN). PYRIDINES: ME. XYLENES: ME. (XYLENE).
AN M 75170672.

<1117>
AU SKRIABIN G K. GOLOVLEVA L A. ANDREEV L V. FINKEL'SHEIN Z I. NOVIK S N.
YR 72.
TI ENZYMATIC OXIDATION OF HETEROCYCLIC COMPOUNDS BY BACTERIAL CULTURES.
TR ENZIMATICHESKOE OKISLENIE GETEROTSIKLICHESKIKH SOEDINENII MIKROBNYMI KUL'TURAMI.
SO DOKL AKAD NAUK SSSR. 203. 2. P483-5. MAR 72.
LG RS.
MJ ALKANES: ME.
MN CHLORAMPHENICOL: PD. PICOLINE: ME.
AN M 72137093.

<1118>
AU SLAVE, T. MIHAIL, ALEXANDRA. BURMAZ, NICULINA.
IN ROM.
YR 74.
TI DEGRADATION OF SOME ORGANIC IMPURITIES IN RESIDUAL WATERS.
SO REV. CHIM. (BUCHAREST). 25. P666-70. 1974.
LG RO.
DE PROMETRYNE BIODEGRDN WASTEWATER. CYANURYL CHLORIDE BIODEGRDN WASTEWATER. ACETONE CYANOHYDRIN BIODEGRDN WASTEWATER. METHANOL BIODEGRDN WASTEWATER. ISOAMYL ALC BIODEGRDN WASTEWATER. ETHYLBENZENE BIODEGRDN WASTEWATER. ETHYLENE GLYCOL BIODEGRDN WASTEWATER. ETHYL

ACETATE BIODEGRDN WASTEWATER. METHACRYLATE BIODEGRDN WASTEWATER. ETHYLAMINE BIODEGRDN WASTEWATER.
AN C 08212076801.

<1119>

AU SLAVE, T. MIHAIL, ALEXANDRA. BURMAZ, NICULINA. NITELEA, I. MARCIA, E.
IN INST. CERCET. CHIM-FARM. BUCHAREST. ROM.
YR 73.
TI BIOLOGICAL OXIDATION OF SOME ORGANIC WASTES IN WASTE WATERS FROM THE ACRYLONITRILE SYNTHESIS.
SO STUD. CERCET. BIOCHIM. 16. P195-201. 1973.
LG RO.
DE ACRYLONITRILE MANUF WASTE WATER. PSEUDOMONAS ACRYLONITRILE MANUF WASTE WATER. BIOL OXIDN ACRYLONITRILE WASTE WATER. SURFACTANT ACRYLONITRILE WASTE WATER.
AN C 07908045444.

<1120>

AU SMETANINA, E. K. PETUKHOV, V. N. SHEVLYAGIN, V. N.
IN USSR.
YR 69.
TI DEPHENOLIZING OF WASTE WATERS BY ANTHRACENE OIL WITH THEIR FINAL PURIFICATION AT A CONCENTRATION PLANT.
SO NAUCH. TR. MAGNITOGORSK. GORNOMET. INST. NO. 68. P108-13. 1969.
LG RS.
DE DEPHENOLIZING WASTE WATER ANTHRACENE OIL. PHENOLS REMOVAL WASTE WATER . COAL BENEFICIATION WASTE WATER.
AN C 07512080055.

<1121>

AU SMITH C E. PIPER R G.
YR 72.
TI PATHOLOGICAL EFFECTS IN FORMALIN TREATED RAINBOW TROUT SALMO-GAIRDNERI.
SO J FISH RES BOARD CAN. 29 (3). 328-329.
DE GILL EPITHELIUM HISTO PATHOLOGY FISHERY SIGNIFICANCE.
AN B 54053850.

<1122>

AU SMITH D I. CALLELY A G.
IN DEPARTMENT OF MICROBIOLOGY, UNIVERSITY COLLEGE, CARDIFF, CF2 1TA.
YR 75.
TI THE MICROBIAL DEGRADATION OF CYCLOHEXANE CARBOXYLIC ACID.
SO J GEN MICROBIOL. 91. 1. P210-2. NOV 75.
LG EN.
MJ ARTHROBACTER: ME. SOIL-MICROBIOLOGY.
MN ARTHROBACTER: EN. OXYGENASES: ME.
AN M 76070927.

<1123>

AU SMITH R V. ROSAZZA J P. ENGEL K O. HUMPHREY D W.
IN DRUG DYNAMICS INSTITUTE, COLLEGE OF PHARMACY, UNIVERSITY OF TEXAS AT AUSTIN, TEXAS 78712 (U.S.A.).
YR 75.
TI GAS-LIQUID AND THIN-LAYER CHROMATOGRAPHIC DETERMINATIONS OF XYLENOLS IN MICROBIAL EXTRACTS.
SO J CHROMATOGR. 106. 1. P235-7. 19 MAR 75.
LG EN.
MJ CHROMATOGRAPHY.
MN CHROMATOGRAPHY-GAS. PHENOLS: AN. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 75211571.

<1124>

AU SMITH R V. ROSAZZA J P. NELSON R A.
YR 74.
TI THIN LAYER CHROMATOGRAPHIC DETERMINATION OF SIMPLE PHENOLS IN MICROBIAL EXTRACTS.
SO J CHROMATOGR. 95 (2). 247-249.
DE METABOLISM.
AN B 59015345.

<1125>

AU SMITH, GERARD V. CHEN, JUH W. SEYFFARTH, KONRAD.
IN DEP. CHEM. BIOCHEM. SOUTH. ILLINOIS UNIV. CARBONDALE. ILL.
YR 73.
TI CATALYTIC AND SONOCATALYTIC OXIDATIONS OF AQUEOUS PHENOL.
SO CATAL. PROC. INT. CONGR. 5TH. 2. P893-903. 1973.
LG EN.
AV HIGHTOWER, JOE W.
DE SONOCATALYTIC OXIDN PHENOL. CATALYTIC SOUND OXIDN PHENOL.

AN C 08017095412.

<1126>
AU SMITH, ROBERT V. HUMPHREY, DAVID W. ENGEL, KENNETH O. ROSAZZA, JOHN P.
IN COLL. PHARM. UNIV. TEXAS. AUSTIN. TEX.
YR 76.
TI MICROBIAL MODELS OF MAMMALIAN METABOLISM: AROMATIC HYDROXYLATION OF ISOMERIC XYLENES.
SO APPL. ENVIRON. MICROBIOL. 31. P448-9. 1976.
LG EN.
DE XYLENE HYDROXYLATION FUNGI. ASPERGILLUS XYLENE HYDROXYLATION. GLIOCLADIUM XYLENE HYDROXYLATION. STREPTOMYCES XYLENE HYDROXYLATION.
AN C 08421147468.

<1127>
AU SNOEYINK, VERNON L. KIM, BYUNG R. HINRICHS, RICHARD L. JENNINGS, PAUL A.
IN ILLINOIS UNIV URBANA. 175750.
YR 74. 83P.
TI SYNTHETIC RESINS AND ACTIVATED CARBON FOR WASTEWATER TREATMENT.
NT FINAL REPT. JAN 73-APR 74.
AV 1.
PR PC$4.00/MF$1.45.
AB PREVIOUS RESEARCH REPORTS ON WATER AND WASTEWATER TREATMENT SYSTEMS FOR THE U.S. AIR FORCE HAVE SHOWN THE APPLICABILITY OF THE ADSORPTION PROCESS. IN THIS REPORT MAJOR EMPHASIS IS PLACED ON THE USE OF SYNTHETIC RESINS AS ADSORBENTS AND ON THEIR PERFORMANCE RELATIVE TO ACTIVATED CARBON. A REVIEW OF THE LITERATURE RELATIVE TO THE USE OF RESINS HAS SHOWN THAT MANY DIFFERENT TYPES OF RESINS ARE AVAILABLE, AND THAT THE CHOICE OF ONE FOR A PARTICULAR APPLICATION DEPENDS GREATLY ON THE COMPOUNDS TO BE ADSORBED. FOR WATERS CONTAINING HIGH CONCENTRATIONS OF DETERGENTS, OR WATERS CONTAINING A HETEROGENEOUS MIXTURE OF ORGANIC COMPOUNDS, SUCH AS DOMESTIC WASTEWATER OR EFFLUENT FROM A SECONDARY BIOLOGICAL PLANT TREATING DOMESTIC SEWAGE. THE WEAK BASE RESIN SEEMS TO FUNCTION BEST. EXPERIMENTAL RESEARCH VERIFIED THIS CONCLUSION; HOWEVER, THE ADSORPTION CAPACITY OF THE RESIN AND THE NUMBER OF SPECIES WHICH COULD BE ADSORBED BY THE RESINS GENERALLY APPEARED TO BE LESS THAN THAT FOR ACTIVATED CARBON. (MODIFIED AUTHOR ABSTRACT).
MJ SEWAGE-TREATMENT, ADSORPTION, ION-EXCHANGE.
MN POLYMERS, ACTIVATED-CARBON, PHENOLS, PESTICIDES.
ID BENZENE-SULFONATES, PERFORMANCE-EVALUATION, COMPARISON, NTISDODAF.
AN N AD-781 196/1.

<1128>
AU SOCZEWINSKI, EDWARD. WAKSMUNDZKA-HAJNOS, MONIKA. BIEGANOWSKA, MARIA .
IN INST. CHEM. PODSTAWOWYCH. AKAD. MED. LUBLIN. POL.
YR 77.
TI EXTRACTION CHROMATOGRAPHY OF QUINOLINE BASES IN SYSTEMS OF THE TYPE WATER + METHANOL/PARAFFIN OIL.
SO CHEM. ANAL. (WARSAW). 22. P289- 94. 1977.
LG PO.
DE PAPER CHROMATOG QUINOLINE BASE. PARTITION PAPER CHROMATOG AROM BASE.
AN C 08718145372.

<1129>
AU SODERGREN, ARNOLD WAYNE.
IN UNIVERSITY OF MINNESOTA (0130) PH.D. 1976, 412PP.
YR 76.
TI INVESTIGATIONS OF THE BACTERIAL METABOLISM OF QUINONE PRECURSORS AND THEIR ANALOGUES.
SO DAI V37(10), SEC B, P5053.
DE CHEMISTRY, BIOLOGICAL (0487).
AN D ADG77-07036.

<1130>
AU SOKOLOWSKA, JADWIGA. MACIEJOWSKI, FRANCISZEK.
IN OSREDEK BADAW.-ROZWOJOWY KAUCZUKOW TWORZYW WINYLOWYCH. OSWIECIM. POL.
YR 77.
TI DETERMINATION OF AROMATIC HYDROCARBONS BY GAS CHROMATOGRAPHY IN WASTE WATER FROM PRODUCTION OF STYRENE AND CUMENE.
SO GAZ, WODA TECH. SANIT. 51. P54- 5. 1977.
LG PO.
DE BENZENE DETN WASTEWATER GAS CHROMATOG. TOLUENE DETN WASTEWATER GAS CHROMATOG. ETHYLBENZENE DETN WASTEWATER GAS CHROMATOG. CUMENE DETN WASTEWATER GAS CHROMATOG. STYRENE DETN WASTEWATER GAS

CHROMATOG.
AN C 08712090279.

<1131>

AU SOLBE, J F DE L G.
IN GREAT BRITAIN DEPT. OF THE ENVIRONMENT, WATER POLLUTION RESEARCH LAB. ELDER WAY, STEVENAGE, HERTFORDSHIRE, ENG.
YR 73.
TI THE RELATION BETWEEN WATER QUALITY AND THE STATUS OF FISH POPULATIONS IN WILLOW BROOK.
SO SOCIETY FOR WATER TREATMENT AND EXAMINATION. JOURNAL, 22(1): 41-61, 1973.
LG EN.
AB NONE.
ID RAINBOW TROUT, WILLOW BROOK, PHENOL, AMMONIA, NORTHAMPTONSHIRE, DEENE LAKE.
DE FISH, ENGLAND, ZINC, RIVERS, LAKES, WATER QUALITY, TOXICITY, POPULATION VARIATIONS.
AN P 7401344.

<1132>

AU SOLI G. BENS E M.
YR 72.
TI BACTERIA WHICH ATTACK PETROLEUM HYDROCARBONS IN A SALINE MEDIUM.
SO BIOTECHNOL BIOENG. 14. 3. P319- 30. MAY 72.
LG EN.
MJ ALCALIGENES: ME. ME.
MN ALCALIGENES: CY. CALIFORNIA. CULTURE-MEDIA. MICROSCOPY-ELECTRON-SCANNING. SEAWATER: AN.
AN M 72193459.

<1133>

AU SOLOD, V. A. MAZINA, E. I.
IN USSR.
YR 69.
TI SEPARATION FROM THE SOIL AND SELECTION OF PHENOL-DESTROYING MICROORGANISMS.
SO TR. KHAR'KOV. SEL'SKOKHOZ. INST. 81. P46-52. 1969.
LG RS.
DE PHENOL BACTERIA CHERNOZEM SOIL.
AN C 07423121845.

<1134>

AU SOLODOV, A. I. SHKOROPAD, D. E. SOLNTSEV, M. YA. TOLMACHEV, I. A. BELYANIN, YU. I. FINOGENOV, V. I.
IN USSR.
YR 70.
TI HIGHLY EFFECTIVE CENTRIFUGAL EXTRACTORS FOR PHENOL REMOVAL FROM WASTE WATERS.
SO KHIM. NEFT. MASHINOSTR. P1-2. 1970.
LG RS.
DE PHENOL COKE OVEN WASTE WATERS. COKE OVEN WASTE WATERS PHENOL. EXTN PHENOL WASTES BENZENE. BENZENE EXTN PHENOL WASTES. BUTYL ACETATE EXTN PHENOLS WASTES. ISOPROPYL ETHER EXTN PHENOLS WASTES. SHALE PRODN WASTES PHENOL EXTN. CENTRIFUGAL EXTRACTORS PHENOLS WASTES.
AN C 07410045376.

<1135>

AU SOTO C. HELLEBUST J A. HUTCHINSON T C.
IN DEP. BOT. UNIV. TORONTO, TORONTO, ONT. CAN.
YR 77.
TI EFFECT OF NAPHTHALENE AND AQUEOUS CRUDE OIL EXTRACTS ON THE GREEN FLAGELLATE CHLAMYDOMONAS- ANGULOSA PART 3 CHANGES IN CELLULAR COMPOSITION.
SO CAN J BOT. 55 (22). 2765-2777.
LG EN.
DE GROWTH CARBON PROTEIN CARBOHYDRATE LIPID.
AN B 65041927.

<1136>

AU SOTO C. HELLEBUST J A. HUTCHINSON T C.
YR 75.
TI THE EFFECTS OF AQUEOUS EXTRACTS OF CRUDE OIL AND NAPHTHALENE ON THE PHYSIOLOGY AND MORPHOLOGY OF A FRESH WATER GREEN ALGA.
SO SLADECEK, V. (ED.). INTERNATIONALE VEREINIGUNG FUER THEORETISCHE UND ANGEWANDTE LIMNOLOGIE, VERHANDLUNGEN. INTERNATIONAL ASSOCIATION OF THEORETICAL AND APPLIED LIMNOLOGY, PROCEEDINGS, VOL. 19, PARTS 1-4. WINNIPEG, MANITOBA, CANADA, 1974. III+748P. (PT. 1.); IV+848P.(PT. 2.); IV+928P.(PT. 3.); III+886P.(PT. 4.). E. SCHWEIZERBART'SCHE VERLAGSBUCHHANDLUNG: STUTTGART, WEST GERMANY. ISBN 3-510-54008-5(PT. 1.); ISBN 3-510-54009-3(PT. 2); ISBN 3-510-54010-7(PT. 3.); ISBN 3-510-54011-5(PT. 4.). (RECD 1976) 2145-2154.

DE CHLAMYDOMONAS-ANGULOSA TOXICITY GROWTH PHOTOSYNTHESIS.
AN B 77022807.

<1137>

AU SOTO C. HELLEBUST J A. HUTCHINSON T C. SAWA T.
YR 75.
TI EFFECT OF NAPHTHALENE AND AQUEOUS CRUDE OIL EXTRACTS ON THE GREEN FLAGELLATE CHLAMYDOMONAS- ANGULOSA PART 1 GROWTH.
SO CAN J BOT. 53 (2). 109-117.
DE MARINE FRESH WATER POLLUTION INHIBITION.
AN B 60010809.

<1138>

AU SOTO, C. HELLEBUST, J. A. HUTCHINSON, T. C.
IN INST. ENVIRON. STUD. UNIV. TORONTO. TORONTO. ONT.
YR 75.
TI EFFECT OF NAPHTHALENE AND AQUEOUS CRUDE OIL EXTRACTS ON THE GREEN FLAGELLATE CHLAMYDOMONAS ANGULOSA. II. PHOTOSYNTHESIS AND THE UPTAKE AND RELEASE OF NAPHTHALENE.
SO CAN. J. BOT. 53. P118-26. 1975.
LG EN.
DE ALGA NAPHTHALENE METAB PHOTOSYNTHESIS. OIL CRUDE CHLAMYDOMONAS TOXICITY.
AN C 09303023116.

<1139>

AU SOTSENKO, N. K. YURZHENKO, A. I. OSADCHII, V. D.
IN KIEV. TEKHNOL. INST. LEGK. ROM. KIEV. USSR.
YR 73.
TI DETERMINATION OF AMINES AND PHENOLS.
SO IZV. VYSSH. UCHEB. ZAVED. TEKHNOL. LEGK. PROM. P65-7. 1973.
LG RS.
DE AMINE PHENOL DETN WATER. WATER ANALYSIS AMINE PHENOL.
AN C 07914083201.

<1140>

IN SOUTHERN ILLINOIS UNIV. CARBONDALE. 327 900.
YR 71. 76P.
TI FEASIBILITY STUDIES OF APPLICATIONS OF CATALYTIC OXIDATION IN WASTEWATER.
AV 1702 ECI-11/71.
PR PC$-GPO/MF$0.95-NTIS.
AB THE RECENT DISCOVERY OF THE SYNERGISTIC EFFECTS OF CERTAIN CATALYSTS AND ULTRASOUND (SONOCATALYSIS) PROMPTED RESEARCH INVESTIGATING THE FEASIBILITY OF USING SONOCATALYSIS FOR ADVANCED WASTEWATER TREATMENT. SONOCATALYTIC OXIDATION, SONOCATALYTIC OZONATION, AND CATALYTIC OZONATION WERE TESTED INDIVIDUALLY ON TREATMENT PLANT EFFLUENT, AND MECHANISTIC STUDIES OF SONOCATALYSIS WERE CONDUCTED CONCURRENTLY USING SYNTHETIC WASTES. INSONATION, ACTIVATED RANEY-NICKEL CATALYST, AND AIR FLOW PRODUCED VERY LARGE REMOVALS OF COD, OXYGEN DEMAND INDEX (ODI), AND COLIFORMS FROM TREATED WASTE-WATERS. SYNTHETIC WASTES OF PHENOL AND ORTHOCHLORONITRO BENZENE (OCNB) WERE PREPARED AND THE SONOCATALYTIC OZONATION STUDIED. (AUTHOR).
MJ SEWAGE-TREATMENT, ULTRASONIC-RADIATION, INDUSTRIAL-WASTE-TREATMENT, ULTRASONIC-RADIATION, CATALYSTS, ULTRASONIC-RADIATION, PHENOLS, SEWAGE-TREATMENT.
MN OZONIZATION, OXIDATION, CHLORINE-AROMATIC-COMPOUNDS, NITRO-COMPOUNDS, NICKEL, COLIFORM-BACTERIA.
ID SONOCHEMISTRY, TERTIARY-SEWAGE-TREATMENT, RANEY-NICKEL-CATALYSTS, BENZENE-CHLORO-NITRO, WATER-POLLUTION-CONTROL, CHEMICAL-OXYGEN-DEMAND .
AN N PB-208 348.

<1141>

AU SPACKMAN, W. DAVIS, A. WALKER, P. L. LOVELL, H. L. ESSENHIGH, R. H.
IN PENNSYLVANIA STATE UNIV. UNIVERSITY PARK. COAL RESEARCH SECTION. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION. 9502206.
YR 77. 68P.
TI CHARACTERISTICS OF AMERICAN COALS IN RELATION TO THEIR CONVERSION INTO CLEAN ENERGY FUELS. QUARTERLY TECHNICAL PROGRESS REPORT, OCTOBER--DECEMBER 1976.
PR PC A04/MF A01.
AB UNDER FACET I, 49 COAL SAMPLES HAVE BEEN ADDED TO THE PENN STATE/ERDA SAMPLE BANK. SIXTY-SIX CHARACTERIZED COAL SAMPLES AND 734 SETS OF ANALYTICAL DATA WERE PROVIDED UPON REQUEST TO OTHER AGENCIES. FACET IV-A RESEARCH ON

REACTOR DEVELOPMENT AND OPERATION HAS LED TO THE CONSTRUCTION OF A COLD MODEL FOR THE FLOW OF GASES THROUGH THE COMBUSTION POT. FLOW ANALYSES INDICATE THAT EVEN WITH RELATIVELY SLOW FLOWS THE MAINSTREAM FLOW IS TURBULENT. METHANOL AND WATER DENSITIES OF A SERIES OF CHAR SAMPLES, STUDIED UNDER FACET IV-B, WERE FOUND TO BE QUITE SIMILAR. DEPOSITION OF CARBON ON CHARS FROM THE CRACKING OF METHANE RESULTS IN A REDUCTION OF CHAR SURFACE AREA AND OPEN PORE VOLUME. SIDERITE AND CALCITE CATALYZE THE CRACKING OF METHANE AT 900 EXP 0 C. NO CATALYTIC ACTIVITY IS EVIDENCED FOR DOLOMITE, PYRITE, ILLITE, QUARTZ, RUTILE, OR KAOLINITE IN THIS REACTION. FROM A COMPARISON OF REFRACTORY AND WATER-COOLED BOTTOM BLOCKS, UNDER FACET V-A, IT WAS FOUND THAT EVEN SIGNIFICANT CHANGES IN THE FURNACE BOTTOM TEMPERATURE CAN ONLY CAUSE MODERATE CHANGES IN PLANE-FLAME FURNACE COMBUSTION PERFORMANCE. (ERA CITATION 02: 050589).

MJ ANTHRACITE, CHARS, COAL, COAL-GASIFICATION, METHANE, COAL-PREPARATION .

MN CALCITE, OXYGEN, SIDERITE, CATALYTIC-EFFECTS, CHEMICAL-ANALYSIS, CHEMISORPTION, COMBUSTION, DENSITY, DESORPTION, INFORMATION-SYSTEMS, MICROSCOPY, POROSITY, PYROLYSIS, SAMPLING.

ID ERDA-010404, ERDA-010600, ERDA-010406, ERDA-014000, AIR-POLLUTION-ABATEMENT, NTISERDA.

AN N FE-2030-6.

<1142>

AU SPANIER, G.

IN STUTTGART. GER.

YR 70.

TI ION EXCHANGE-CIRCULATION EQUIPMENT AND CONCENTRATION TREATMENT.

SO OBERFLAECHE. P520-2, 524; 1971, (1), 20, 22, 24. 1970.

LG GE.

DE CYANIDE REMOVAL RINSE WATER. CHROMATE REMOVAL RINSE WATER. ION EXCHANGE RINSE WATER.

AN C 07908045414.

<1143>

AU SPITSYNA D N. DAVIDOVA E G. GRADOVA N B. KONOVALOV S A.

YR 74.

TI ASSIMILATION OF HYDRO CARBONS BY BACTERIAL CULTURES OF MYCOCOCCUS-SP AND PSEUDOMONAS-SP.

SO PRIKL BIOKHIM MIKROBIOL. 10 (2). 187-195.

DE CANDIDA-TROPICALIS RADIO LABELED OCTA DECANE ISOTOPE ACCUMULATION CELL COMPONENTS METABOLITES.

AN B 59014207.

<1144>

AU SPRAGUE, JOHN B. DRURY, DONALD E.

IN FISHERIES RESEARCH BOARD OF CANADA BIOLOGICAL STATION. ST. ANDREWS, NB.

YR 69.

TI AVOIDANCE REACTIONS OF SALMONID FISH TO REPRESENTATIVE POLLUTANTS.

SO SEE CIT. NO. P70-04127,PP. 169- 186, 1969.

LG EN.

AB NONE.

ID SPONTANEOUS AVOIDANCE.

DE FISHES, CHLORINE, PHENOL, DETERGENTS, PULP WASTES.

AN P 7004136.

<1145>

AU STAFFORD D A. CALLELY A G.

YR 73.

TI THE ROLE OF MICROORGANISMS IN WASTE TIP LAGOON SYSTEMS PURIFYING COKE OVEN EFFLUENTS.

SO J APPL BACTERIOL. 36 (1). 77-87.

DE BACTERIA PHENOL DEGRADATION.

AN B 57011010.

<1146>

AU STARKEY, R J, JR.

IN GENERAL ELECTRIC CO. RE-ENTRY & ENVIRONMENTAL SYSTEMS DIV. ENVIRONMENTAL SCIENCES LAB. PHILADELPHIA, PA.

YR 71.

TI PHENOL ANALYSIS -- SOME ANALYTICAL CONSIDERATIONS.

SO SENSING OF ENVIRONMENTAL POLLUTANTS. JOINT CONFERENCE. UNBOUND PAPERS. (HELD IN PALO ALTO, CALIF. NOV. 8 - 10, 1971). SPONSORED BY AMERICAN CHEMICAL SOCIETY; AMERICAN INSTITUTE OF AERONAUTICS AND ASTRONAUTICS; U.S. ENVIRONMENTAL PROTECTION AGENCY; INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS; INSTRUMENT SOCIETY OF AMERICA; U.S. NATIONAL AERONAUTICS AND SPACE ADMINISTRATION AND U.S. NATIONAL OCEANOGRAPHIC AND ATMOSPHERIC ADMINISTRATION. IN: AIAA

PAPER NO. 71-1036. 10 PAGES. 1971.
LG EN.
AB NONE.
ID ANALYSIS EQUIPMENT AND METHODS. TASTE.
DE WATER POLLUTANTS. POTABLE WATER. INSTRUMENTS. PHENOL. ODORS.
AN P 7006934.

<1147>
AU STARKEY. ROLAND J. JR. SHULL. JAMES J. ORR. ELAINE D.
IN RE-ENTRY ENVIRON. SYST. DIV. GEN. ELECTR. CO. PHILADELPHIA. PA.
YR 71.
TI GENERAL ELECTRIC PHENOL ANALYSIS EQUIPMENT.
SO TECHNOL. UTIL. IDEAS 70'S BEYOND. PROC. SPEC. AAS (AMER. ASTRONAUT. SOC.)/AIAA TECH. EVENT. P203-12. 1971.
LG EN.
AV FORBES. F. W.
DE PHENOLS DETN WATER. WATER ANAL PHENOLS. EXTN PHENOLS DIETHYL ETHER. FUEL CELL DRINKING WATER.
AN C 07520121230.

<1148>
AU STAROVOITOV. I. I. PSHIRKOV. S. YU. NEFEDOVA. M. YU. YAKOVLEV. G. I. ADANIN. V. M. SKRYABIN. G. K.
IN INST. BIOKHIM. FIZIOL. MIKROORG. PUSHCHINO-ON-OKA. USSR.
YR 73.
TI MICROBIOLOGICAL OXIDATION OF 1,5-DIMETHYLNAPHTHALENE.
SO DOKL. AKAD. NAUK SSSR. 213. P1210-12 (BIOCHEM). 1973.
LG RS.
DE NAPHTHALENE DIMETHYL DERIV OXIDN BACTERIA.
AN C 08019106843.

<1149>
AU STARZECKA A.
YR 75.
TI THE INFLUENCE OF ACROLEIN AND HYDROCRYLE ON THE DEVELOPMENT DYNAMICS OF AQUATIC BACTERIA.
SO ACTA HYDROBIOL. 17 (4). (RECD 1976) 391-403.
DE PSEUDOMONAS ACHROMOBACTER ALCALIGENES TOXICITY STREAM POLLUTION.
AN B 63030370.

<1150>
AU STATHAM C N. SZYJKA S P. MENAHAN L A. LECH J J.
YR 77.
TI FRACTIONATION AND SUB CELLULAR LOCALIZATION OF MARKER ENZYMES IN RAINBOW TROUT LIVER.
SO BIOCHEM PHARMACOL. 26 (15). 1395-1400.
DE LYSOSOMES MITOCHONDRIA MICROSOMES ACID PHOSPHATASE ALKALINE PHOSPHATASE 5 NUCLEOTIDASE GLUCOSE 6 PHOSPHATASE BENZO PYRENE HYDROXYLASE GLUCURONYL TRANSFERASE.
AN B 64062258.

<1151>
AU STEFANESCU. T. URSU. GH.
IN ROM.
YR 73.
TI METHOD FOR ACRYLONITRILE AND ACETONITRILE DETERMINATION IN RESIDUAL WATERS.
SO MATER. PLAST. (BUCHAREST). 10. P330-4. 1973.
LG RO.
DE ACRYLONITRILE DETN WATER. ACETONITRILE DETN WATER. WATER ANALYSIS ACRYLONITRILE ACETONITRILE.
AN C 08008040770.

<1152>
AU STEGEMAN J J.
YR 77.
TI SEX DIFFERENCES IN HEPATIC MICROSOMAL CYTOCHROME P-450 IN SPAWNING TROUT.
SO FED PROC. 36 (3). 941.
DE ABSTRACT RAINBOW TROUT SALMO-GAIRDNERI BROOK TROUT SALVELINUS-FONTINALIS MIXED FUNCTION OXIDASE AMINOPYRINE DEMETHYLASE BENZO A PYRENE HYDROXYLASE STEROID METABOLISM EPR.
AN B 77038801.

<1153>
AU STEIN. ALAN. KELLER. E. C. JR.
IN DEP. BIOL. WEST VIRGINIA UNIV. MORGANTOWN. W. VA.
YR 73.
TI GENE AND GROWTH DYNAMICS OF CHLORELLA UNDER CONTINUOUS CULTURE DURING PHENOL STRESS.
SO PROC. W. VA. ACAD. SCI. 45. P103-11. 1973.
LG EN.
DE PHENOL ALGAE GROWTH GENETICS.

CHLORELLA GROWTH GENETICS PHENOL.
AN C 08025141471.

<1154>

AU STEMPLE, RUTH.
IN OAK RIDGE NATIONAL LAB. TENN.
YR 71. 15P.
TI PHENOL POLLUTION OF WATER- A BIBLIOGRAPHY.
PR PC$3.00 MF$0.95.
AB FOR ABSTRACT, SEE NSA 26 01, NUMBER 01730.
MJ PHENOLS, WATER-POLLUTION.
AN N ORNL-TM-3431.

<1155>

AU STEPANOV, V. S. FLEROV, B. A.
IN USSR.
YR 69.
TI EFFECT OF SUBTOXIC CONCENTRATIONS OF PHENOL ON THE QUANTITY AND QUALITY OF THE PROGENY OF LEBISTES RETICULATUS.
SO TR. INST. BIOL. VNUTR. VOD, AKAD. NAUK SSSR. NO. 19. P60-1. 1969.
LG RS.
DE FISH FETUSES PHENOL. FETUSES FISH PHENOL. PHENOL FISH FETUSES.
AN C 07219097851.

<1156>

AU STEPANYAN, I. S. VINOKUR, I. A. PADARYAN, G. M.
IN USSR.
YR 72.
TI LIQUID-PHASE OXIDATION OF PHENOL, METHANOL, AND FORMALDEHYDE SUITABLE FOR PURIFYING WASTE WATERS.
SO KHIM. PROM. (MOSCOW). 48. P430- 1. 1972.
LG RS.
DE PHENOL LIQ PHASE OXIDN. METHANOL LIQ PHASE OXIDN. FORMALDEHYDE LIQ PHASE OXIDN. OXIDN FORMALDEHYDE METHANOL PHENOL.
AN C 07714092575.

<1157>

AU STIRLING, LYNNE A. WATKINSON, R. J. HIGGINS, I. J.
IN MILSTEAD LAB. CHEM. ENZYMOL. SHELL RES. LTD. SITTINGBOURNE. ENGL.
YR 77.
TI MICROBIAL METABOLISM OF ALICYCLIC HYDROCARBONS: ISOLATION AND PROPERTIES OF A CYCLOHEXANE-DEGRADING BACTERIUM.
SO J. GEN. MICROBIOL. 99. P119-25. 1977.
LG EN.
DE CYCLOHEXANE METAB NOCARDIA.
AN C 08711080995.

<1158>

AU STOLBUNOV A K.
YR 76.
TI MICROBIAL DECOMPOSITION OF PHENOLS IN THE VOLGA AND ITS RESERVOIRS.
SO HYDROBIOL J (ENGL TRANSL GIDROBIOL ZH). 12 (1). (RECD 1977) 24-29.
DE USSR BACTERIA POLLUTION.
AN B 77067618.

<1159>

AU STOLBUNOV A K.
YR 71.
TI PHENOL AND THIO CYANATE DECOMPOSING BACTERIA AS A FACTOR IN THE NATURAL PURIFICATION OF THE DNIEPER RESERVOIRS.
SO HYDROBIOL J (ENGL TRANSL GIDROBIOL ZH). 7 (2). 6-14.
DE USSR POLLUTION.
AN B 72057772.

<1160>

AU STOM D I. BEIM A M.
YR 76.
TI EFFECT OF PHENOLS ON SOME SPECIES OF ALGAE.
SO GIDROBIOL ZH. 12 (6). (RECD 1977) 53-57.
DE NITELLA TOXICITY OXYGEN UPTAKE SULFONES O AMINO PHENOL BETA NAPHTHOL THYMOL GUAIACOL QUINOL DI METHYL ESTER VERATROLE O CRESOL PYRO CATECHINS BIOLOGICAL DEPRESSANTS.
AN B 64034839.

<1161>

AU STOM D I. BOBOVSKAYA L P. TIMOFEEVA S S. KALMYCHKOV G V. KOZHOVA O M.
YR 74.
TI INFLUENCE OF PHENOLS AND THEIR OXIDATION PRODUCTS ON AQUATIC PLANTS AND THEIR CONTENT OF SULFHYDRYL GROUPS.
SO DOKL BIOCHEM (ENGL TRANSL DOKL AKAD NAUK SSSR SER BIOKHIM). 216 (1- 6). 233-236.
DE NITELLA-SP DUNALIELLA-SP CHARA- SP ELODEA-CANADENSIS CHLOROPLASTS OXIDATION OXYGEN UPTAKE PROTOPLASM

MOVEMENT TOXICITY.
AN B 75045190.

<1162>
AU STOM D J. KOZHOVA O M.
YR 76.
TI COMBINED ACTION OF POLY PHENOLS QUINONES REDUCERS AND CERTAIN OTHER COMPOUNDS ON AQUATIC PLANTS.
SO POL ARCH HYDROBIOL. 23 (3). (RECD 1977) 401-408.
DE NITELLA ELODEA DUNALIELLA RESORCINOL PYRO CATECHOL HYDRO QUINONE THIOLS SODIUM DI ETHYL DI THIO CARBAMATE CYSTEINE GLUTATHIONE ASCORBIC-ACID SACCHAROSE ATP INDUSTRIAL WASTES OXIDATION PRODUCTS.
AN B 64010757.

<1163>
AU STOM, D. I. RATOVSKII, G. V. TIMOFEEVA, S. S. SUSLOV, S. N.
IN USSR.
YR 76.
TI REASONS FOR THE HIGHER TOXICITY OF QUINONE ORTHOISOMERS PRESENT IN INDUSTRIAL EFFLUENTS.
SO GIDROBIOL. ISSLED. VODOEMOV SIBIRI. P130-3. 1976.
LG RS.
DE TOXICITY QUINONE WASTEWATER.
AN C 08726206025.

<1164>
AU STOM, D. I. SLABSHIS, O. A. TIMOFEEVA, S. S.
IN USSR.
YR 75.
TI CHROMATOGRAPHIC DETECTION OF O- AND P-QUINONES WHEN THEY ARE BOTH PRESENT IN WATER.
SO GIDROKHIM. MATER. 64. P204-9. 1975.
LG RS.
DE QUINONE DETN CHROMATOG. BENZENE BIOCHEM OXIDN. PHENOL BIOCHEM OXIDN. NAPHTHOL BIOCHEM OXIDN.
AN C 08608046976.

<1165>
AU STONE, RALPH. SMALLWOOD, HERBERT.
IN STONE (RALPH) AND CO. INC. LOS ANGELES, CALIF.
YR 73. 368P.
TI INTERMEDIA ASPECTS OF AIR AND WATER POLLUTION CONTROL.
AV 600-73-003.
PR PC-GPO/MF$1.45-NTIS.
AB MAJOR AIR AND WATER POLLUTANT CONTROL STRATEGIES ARE IDENTIFIED WHICH ARE OF CURRENT NATIONAL CONCERN. EMPHASIS IS ON ARTIFICIAL TRANSFER BETWEEN AIR OR WATER. NATURAL TRANSFERS ARE NOT TREATED IN DEPTH AND LAND IS CONSIDERED ONLY AS A MEANS FOR RESIDUE DISPOSAL. DISCUSSIONS INCLUDE DANGERS OF INTERMEDIA TRANSFER FROM LAND TO AIR OR WATER. CONTROL METHODS FOR EACH INTERMEDIA POLLUTANT ARE DISCUSSED; COMPARATIVE COSTS AND EXPECTED UNIT PROCESS EFFICIENCIES ARE GIVEN. RESIDUE DISPOSAL METHODS AND PROBLEMS ARE PRESENTED. INSTITUTIONAL FACTORS, REGULATIONS AND STRATEGIES FOR POLLUTION CONTROL ARE SUMMARIZED AND DISCUSSED. SUMMARY DATA ARE DEVELOPED FOR MAJOR POLLUTANTS AND RESIDUES DISCHARGED NATIONALLY AND IN THE CALIFORNIA SOUTH COAST REGION, ALONG WITH PRODUCT/POLLUTANT RATIOS FOR INDUSTRIES REPRESENTED BY THE STANDARD INDUSTRIAL CLASSIFICATION CODE AND OTHER PUBLIC ECONOMIC SECTORS. THE FRAMEWORK FOR A MATHEMATICAL MODEL IS DEVELOPED FOR THE PREDICTION OF THE EFFECTS OF CHANGE IN ANY OF THE ELEMENTS OF THE PRODUCTION-CONSUMPTION-POLLUTION-REGULATION NETWORK. (MODIFIED AUTHOR ABSTRACT).
MJ AIR-POLLUTION, CONTAMINANTS, WATER-POLLUTION, CONTAMINANTS.
MN EMISSION, TOXICITY, SULFUR- OXIDES, NITROGEN-OXIDES, METALS, PARTICLES, PHOSPHORUS, CARBON- MONOXIDE, HYDROCARBONS, FLUORIDES, HYDROGEN-CHLORIDE, ARSENIC, HYDROGEN- CYANIDE, AMMONIA, ETHYLENE, PESTICIDES, SURFACTANTS, LAW- JURISPRUDENCE, ECONOMICS, EDUCATION, STATISTICAL-DATA, MATHEMATICAL- MODELS, INDUSTRIAL-WASTE-TREATMENT, SEWAGE-TREATMENT, STRATEGY.
ID AIR-POLLUTION-CONTROL, WATER-POLLUTION-CONTROL, THERMAL-POLLUTION, PATH-OF-POLLUTANTS, EPAORM.
AN N PB-224 812/8.

<1166>
AU STOVEKEN, JOHN. SPROSTON, THOMAS.
IN VERMONT UNIV. BURLINGTON. WATER RESOURCES RESEARCH CENTER. OF WATER RESCURCE RESEARCH, WASHINGTON, D.C. 109 950.

YR 74. 8P.
TI OZONE AND CHLORINE DEGRADATION OF WASTEWATER POLLUTANTS.
NT COMPLETION REPT. 1 JUL 73-30 JUN 74.
PR PC$3.25/MF$2.25.
AB AN ATTEMPT WAS MADE TO COMPARE THE EFFECTIVENESS OF CHLORINATION AND OZONATION ON THE REMOVAL OF A VARIETY OF ORGANIC COMPOUNDS FROM SOLUTIONS. BOTH OZONE AND CHLORINE CONCENTRATIONS WERE MEASURED USING THE ORTHOTOLIDINE-MANGANESE SULFATE (OTM) METHOD; CONCENTRATIONS WERE MEASURED SPECTROPHOTOMETRICALLY, AND THIN-LAYER AND GAS-LIQUID CHROMATOGRAPHY WERE USED TO EVALUATE OXIDATION PRODUCTS AND CONCENTRATIONS. BOTH CHLORINE AND OZONE ARE EFFECTIVE BUT VARY GREATLY IN THEIR ACTIVITY AND SPECIFIC REACTIONS. CHLORINE AT 3 TIMES CONC. WAS NOT EFFECTIVE AGAINST AMINO ACID PROLINE, P. DIOXANE, DIPHENYLAMINE, GUANIDINE, N-HEXANE, PHENOL, AND PYRIDINE. OZONE WAS VERY DESTRUCTIVE TO THE FATTY ACIDS LEVULINIC, LINOLEIC AND OLEIC ACIDS. THIS EXPLAINS A PART OF OZONE GERMICIDAL ACTIVITY.
MJ WATER-POLLUTION-CONTROL, CHLORINATION, OZONIZATION, ORGANIC-WASTES.
MN COMPARISON, SEWAGE-TREATMENT, INDUSTRIAL-WASTE-TREATMENT, ORGANIC-COMPOUNDS.
ID NTISDIOWRT.
AN N PB-238 365/1SL.

<1167>

AU STRAFELDA, FRANTISEK.
IN DEP. INSTRUM. ANAL. CHEM.- TECHNOL. HOCHSCH. PRAGUE. CZECH.
YR 70.
TI AUTOMATIC ANALYSIS FOR PHENOL IN WASTE WATERS.
SO SB. VYS. SK. CHEM.-TECHNOL. PRAZE, ANAL. CHEM. NO. 6. P31-50. 1970.
LG CZ.
DE PHENOL DETN WASTE WATER. OXIDN PHENOL WASTE WATER. BIAMPEROMETRIC ELECTRODE SYSTEM. COULOMETRIC TITRN PHENOL DETN.
AN C 07420102845.

<1168>

AU STRELOV V. SAUER M. JOHANIDES V.
YR 74.
TI BIOLOGICAL OXIDATION OF CRESOL BY MEANS OF PURE AND MIXED BACTERIAL CULTURES.
TR BIOLOSKA OKSIDACIJA KREZOLA S POMOCU CISTIH I MJESOVITIH BAKTERIJSKIH KULTURA.
SO ARH HIG RADA TOKSIKOL. 25. 2. P275-84. 1974.
MJ CRESOLS: IP. WASTE-DISPOSAL- FLUID: AN.
MN BIODEGRADATION. WATER- MICROBIOLOGY.
AN M 75027898.

<1169>

AU STRUHSAKER J W. ELDRIDGE M B. ECHEVERRIA T.
YR 74.
TI EFFECTS OF BENZENE A WATER SOLUBLE COMPONENT OF CRUDE OIL ON EGGS AND LARVAE OF PACIFIC HERRING AND NORTHERN ANCHOVY.
SO VERNBERG, F. JOHN AND WINONA B. VERNBERG (ED.). POLLUTION AND PHYSIOLOGY OF MARINE ORGANISMS. SYMPOSIUM. XIII+492P. ILLUS. ACADEMIC PRESS: NEW YORK, N.Y. U.S.A. LONDON, ENGLAND. ISBN 0-12-718250-0. (RECD 1975) 253-284.
DE ENGRAULIS-MORDAX CLUPE -PALLASI DEVELOPMENT HATCHING SURVIVAL BEHAVIOR GROWTH RESPIRATION WATER POLLUTION.
AN B 75066718.

<1170>

AU STRUHSAKER, JEANNETTE W.
IN NATL. MAR. FISH. SERV. NOAA. TIBURON. CALIF.
YR 77.
TI EFFECTS OF BENZENE (A TOXIC COMPONENT OF PETROLEUM) ON SPAWNING PACIFIC HERRING, CLUPEA HARENGUS PALLASI.
SO FISH. BULL. 75. P43-9. 1977.
LG EN.
DE BENZENE DISTRIBUTION OVARY EGG HERRING. EMBRYO TOXICITY FISH BENZENE . BEHAVIOR BENZENE HERRING. WATER POLLUTION BENZENE FISH. REPRODN HERRING BENZENE.
AN C 08701000813.

<1171>

AU STRUHSAKER, JEANNETTE W. ELDRIDGE, MAXWELL B. ECHEVERRIA, TINA.
IN SOUTHWEST FISH. CENT. NATL. MAR. FISH. SERV. TIBURON. CALIF.
YR 74.
TI EFFECTS OF BENZENE (A WATER- SOLUBLE COMPONENT OF CRUDE OIL) ON EGGS AND

LARVAE OF PACIFIC HERRING AND NORTHERN ANCHOVY.
SO POLLUT. PHYSIOL. MAR. ORG. P253- 84. 1974.
LG EN.
AV VERNBERG, F. JOHN; VERNBERG, WINONA B.
DE BENZENE TOXICITY HERRING ANCHOVY. EGG LARVAE FISH BENZENE.
AN C 08313109384.

<1172>

AU SUESS M J.
YR 76.
TI THE ENVIRONMENTAL LOAD AND CYCLE OF POLY CYCLIC AROMATIC HYDRO CARBONS.
SO SCI TOTAL ENVIRON. 6 (3). 239-250.
DE HUMAN ANIMALS MICROORGANISMS PHYTO PLANKTON ALGAE PLANTS 3 4 BENZ PYRENE CARCINOGENS POLLUTION.
AN B 63041615.

<1173>

AU SUESS M J.
YR 72.
TI LABORATORY EXPERIMENTATION WITH 3 4 BENZ PYRENE IN AQUEOUS SYSTEMS AND THE ENVIRONMENTAL CONSEQUENCES.
SO ZENTRALBL BAKTERIOL PARASITENKD INFEKTIONSKR HYG ERSTE ABT ORIG REIHE B HYG PRAEV MED. 155 (5-6). 541-546.
DE CARCINOGEN WATER POLLUTION PHOTO DEGRADATION.
AN B 55061852.

<1174>

AU SUGANO, SABURO.
IN KANAGAWA PREFECT. PUBLIC CENT. YOKOHAMA. JAPAN.
YR 71.
TI ANALYSIS OF HEAVY METALS AND CYANIDES IN WASTE WATER AND THE MEASUREMENT OF BIOCHEMICAL OXYGEN DEMAND (BOD).
SO KINZOKU HYOMEN GIJUTSU. 22. P635-47. 1971.
LG JA.
DE ANAL HEAVY METALS WASTE WATER. CYANIDE DETN WASTE WATER.
AN C 07612063018.

<1175>

AU TAKAHASHI, JOJI. UEMURA, NAMIO. UEDA, KIYOMOTO.
IN DEP. BIOCHEM. ENG. TOKYO KYOIKU UNIV. TOKYO. JAPAN.
YR 70.
TI FUNDAMENTAL STUDIES ON THE CULTIVATION OF HYDROCARBON-UTILIZING MICROORGANISM. I. MASS BALANCE FOR BACTERIAL GROWTH ON N-PENTANE.
SO AGR. BIOL. CHEM. 34. P32-7. 1970.
LG EN.
DE STOICHIOMETRY BACTERIA GROWTH. GROWTH BACTERIA STOICHIOMETRY. BACTERIA GROWTH STOICHIOMETRY. HYDROCARBON UTILIZATION BACTERIA. PENTANE UTILIZATION BACTERIA.
AN C 07319095639.

<1176>

AU TAKAHASHI, SEIZO.
IN NISHO IWAI CO. LTD. JAPAN.
YR 72.
TI POLLUTION CONTROL TECHNOLOGY. TREATMENT UNIT FOR PHENOLIC WASTE WATERS. PHENEX PROCESS.
SO SEKIYU TO SEKIYU KAGAKU. 16. P80- 1. 1972.
LG JA.
DE REVIEW PHENOLIC WATER TREATMENT. CATALYTIC CRACKING WATER TREATMENT REVIEW.
AN C 07622131161.

<1177>

AU TAMVELIUS, H. MOLDER, L.
IN USSR.
YR 69.
TI SELECTIVE EXTRACTION OF MONOHYDRIC PHENOLS FROM SHALE TAR WATERS. 2.
SO TR. TALLIN. POLITEKH. INST. SER. A. NO. 270. P131-6. 1969.
LG RS.
DE PHENOLS MONOHYDRIC SHALE TAR. BENZENE EXTN MONOHYDRIC PHENOLS. GASOLINE EXTN MONOHYDRIC PHENOLS. DIHYDRIC PHENOLS SHALE TAR WATERS.
AN C 07422114014.

<1178>

AU TAMVELIUS, H. MOLDER, L. LEETMAA, T.
IN USSR.
YR 69.
TI SELECTIVE EXTRACTION OF MONOATOMIC PHENOLS FROM SHALE TAR WATER. 1.
SO TR. TALLIN. POLITEKH. INST. SER. A. NO. 270. P117-30. 1969.
LG RS.
DE PHENOLS MONOHYDRIC EXTN SHALE TAR. DIHYDRIC MONOHYDRIC PHENOLS DISTRIBUTION. SOLVENTS EXTN PHENOLS.

BENZENE EXTN PHENOLS. GASOLINE SHALE PHENOLS EXTN.
AN C 07422114012.

<1179>
AU TANABE, MASATO. DEHN, ROBERT L. KUO, MAU H.
IN LIFE SCI. DIV. STANFORD RES. INST. MENLO PARK. CALIF.
YR 71.
TI MICROBIAL OXIDATION OF P-DIETHYLBENZENE.
SO BIOCHEMISTRY. 10. P1087-90. 1971.
LG EN.
DE DIETHYLBENZENE MICROBIAL OXIDN PSEUDOMONAS.
AN C 07425136831.

<1180>
AU TANABE, YUZO.
IN JAPAN.
YR 74.
TI ANALYSIS OF CYANIDE IN WASTE WATERS.
SO HOKKAIDO-RITSU KOGYO SHIKENJO HOKOKU. 228. P8-17. 1974.
LG JA.
DE CYANIDE DETN WASTEWATER ELECTRODE.
AN C 08212076835.

<1181>
AU TAO, B. Y. DERSHOWITZ, D. J. TROIANO, R. A.
IN OAK RIDGE NATIONAL LAB. TENN. RIDGE, TENN. SCHOOL OF CHEMICAL ENGINEERING PRACTICE. RESEARCH AND DEVELOPMENT ADMINISTRATION. 4832000 9500153.
YR 76. 41P.
TI ADSORPTION OF POLYNUCLEAR AND MONOCYCLIC AROMATIC HYDROCARBONS ON SUSPENDED YEAST CELLS.
PR PC A03/MF A01.
AB THE ADSORPTION OF ANTHRACENE ON YEAST CELLS IN THE PRESENCE OF ANILINE, BENZENE, OR TOLUENE WAS EXAMINED IN WATER AT 5, 20, AND 35 EXP 0 C. THE CONCENTRATION OF ANTHRACENE VARIED FROM 10 TO 50 MU G/LITER AND THE CONCENTRATION OF MONOCYCLIC AROMATIC HYDROCARBONS FROM 10 TO 50 MG/LITER. THE YEAST CELL CONCENTRATION WAS CONSTANT AT 10 MG/LITER. EQUILIBRIUM WAS REACHED WITHIN ONE HOUR FOR ALL CASES. AN ENTHALPY OF ADSORPTION OF APPROXIMATELY 2.5 KCAL/MOLE WAS CALCULATED FOR ANTHRACENE. (ERA CITATION 02: 039680).
MJ ANTHRACENE, YEASTS.
MN ADSORPTION, ANILINE, BENZENE, MEDIUM-TEMPERATURE, SORPTIVE-PROPERTIES, TOLUENE.
ID ERDA-400105, ENTHALPY, AROMATIC-POLYCYCLIC-HYDROCARBONS, NTISERDA.
AN N ORNL/MIT-238.

<1182>
AU TARDIFF, R. G. DEINZER, M.
IN NATL. ENVIRON. RES. CENT. ENVIRON. PROT. AGENCY. CINCINNATI. OHIO.
YR 73.
TI TOXICITY OF ORGANIC COMPOUNDS IN DRINKING WATER.
SO PROC. WATER QUAL. CONF. 15TH. P23-37. 1973.
LG EN.
AV SNOEYINK, VERNON L.
DE WATER TOXICITY ORG COMPD. ETHANOL SYNERGISM WATER CONTAMINANT. POLLUTION WATER ORG COMPD.
AN C 08123146519.

<1183>
AU TAUBAEV, T. T. VASIGOV, T. VERBA, V. V. KUTLIEV, D. BURIEV, S.
IN INST. BOT. TASHKENT. USSR.
YR 73.
TI EFFECT OF CHLORELLA ON THE PURIFICATION OF WATERS POLLUTED BY PHENOL .
SO UZB. BIOL. ZH. 17. P43-4. 1973.
LG RS.
DE PHENOL BIODEGRDN WASTE WATER. CHLORELLA BIODEGRDN PHENOL.
AN C 08012063583.

<1184>
AU TAUTS, M. I. SELIVANOVA, T. M. SEMENENKO, V. E.
IN K. A. TIMIRYAZEV INST. PLANT PHYSIOL. MOSCOW. USSR.
YR 71.
TI INTERPRETATION OF AUTOSTIMULATION EFFECT OF CHLORELLA GROWTH.
SO FIZIOL. RAST. 18. P69-77. 1971.
LG RS.
DE INDOLE ACETATE ALGAE. HORMONES ALGAE GROWTH. CHLORELLA GROWTH INDOLE ACETATE.
AN C 07419095749.

<1185>
AU TAYLOR B F. CAMPBELL W L. CHINOY I.
YR 70.
TI ANAEROBIC DEGRADATION OF THE BENZENE

NUCLEUS BY A FACULTATIVELY ANAEROBIC MICROORGANISM.
SO J BACTERIOL. 102. 2. P430-7. MAY 70.
LG EN.
MJ BENZENE: ME.
MN BENZOATES: ME. CULTURE-MEDIA. PSEUDOMONAS: EN, GD, IP.
AN M 70202701.

<1186>

AU TEPLYAKOVA, E. V. TRUBKO, E. I. ILICHKINA, A. G.
IN USSR.
YR 74.
TI EFFECT OF SOME FURAN COMPOUNDS ON THE SANITARY CONDITIONS OF RESERVOIRS.
SO TR. LENINGR. SAN.-GIGIEN. MED. IN-TA. P51-3. 1974.
LG RS.
DE FURAN POLLUTION WATER.
AN C 08410064984.

<1187>

AU TETTAMANTI, KAROLY. SAWINSKY, JANOS. MANCZINGER, JOZSEF. HUNEK, JOZSEF. HAVAS, GEZA.
IN VEGYIP. MUVELETEK TANSZ. BUDAPESTI MUSZ. EGY. BUDAPEST. HUNG.
YR 70.
TI NEW LIQUID EXTRACTION METHOD FOR PHENOL REMOVAL FROM INDUSTRIAL WASTE WATER.
SO MAGY. KEM. LAPJA. 25. P502-6. 1970.
LG HU.
DE PHENOL REMOVAL WASTE WATERS. KETONES PHENOL REMOVAL WASTE WATERS.
AN C 07402006274.

<1188>

AU THIELEMANN H.
YR 72.
TI IDENTIFICATION AND REMOVAL OF SUBSTANCES IMPARTING AN ODOR AND AFFECTING THE TASTE OF RIVER BANK FILTERED GROUND WATER.
SO MIKROCHIM ACTA. (1). 79-80.
DE PHENOLS CHLORINE OXIDE ACTIVATED CARBON HYDRO CARBONS.
AN B 54028398.

<1189>

AU THIELEMANN H.
YR 77.
TI PURIFICATION POSSIBILITIES OF WASTE WATER CONTAINING PHENOL AND EXPERIMENTAL LABORATORY TRIAL RESULTS ON THE OXIDATION OR ADSORPTION OF PHENOL TEST SOLUTIONS ON INDUSTRIAL ASHES ACCORDING TO THE AIR-ASH PROCEDURE USING ADDITIONAL CATALYSTS.
TR REINIGUNGSMOGLICHKEITEN PHENOLHALTIGER ABWASER UND EXPERIMENTELLE LABORVERSUCHSERGEBNISSE ZUR OXYDATION BZW. ADSORPTION VON PHENOLTESTLOSUNGEN AN INDUSTRIEASCHE NACH DEM LUFT-ASCHE-VERFAHREN UNTER VERWENDUNG ZUSATZLICHER KATALYSATOREN.
SO Z GESAMTE HYG. 23. 3. P155-8. MAR 77.
LG GE.
MJ INDUSTRIAL-WASTE: AN. WATER-POLLUTANTS-CHEMICAL: IP.
MN ADSORPTION. METHODS.
AN M 77197856. 7709.

<1190>

AU THIELEMANN H.
YR 76.
TI EXPERIMENTAL STUDIES ON THE POSSIBILITIES OF THIN-LAYER CHROMATOGRAPHY FOR THE SEPARATION AND IDENTIFICATION OF PHENOL COMPOUNDS IN WATER.
TR EXPERIMENTELLE UNTERSUCHUNGEN UBER MOGLICHKEITEN ZUR DUNNSCHICHTCHROMATOGRAPHISCHEN TRENNUNG UND IDENTIFIZIERUNG VON PHENOLKOMPONENTEN IN WASSERN.
SO Z GESAMTE HYG. 22. 3. P169-72. MAR 76.
LG GE.
MJ PHENOLS: AN.
MN CHROMATOGRAPHY-THIN-LAYER: MT.
AN M 77017690. 7701.

<1191>

AU THIELEMANN H.
YR 76.
TI THIN-LAYER CHROMATOGRAPHY FOR THE IDENTIFICATION OF QUINONE COMPOUNDS FORMED DURING THE TREATMENT OF DRINKING WATER WITH CHLORINE OR CHLORINE DIOXIDE AND 3,4-BENZPYRENE.
TR UBER EINE DUNNSCHICHTCHROMATOGRAPHISCHE IDENTIFIZIERUNGSMOGLICHKEIT DER BEI DER TRINKWASSERAUFBEREITUNG DURCH CHLOR BZW. CHLORDIOXID UND 3,4-BENZPYREN ENTSTEHENDEN CHINONVERBINDUNGEN.
SO Z GESAMTE HYG. 22. 3. P163-5. MAR

76.
LG GE.
MJ QUINONES: AN. WATER-SUPPLY.
MN CHLORINE.
AN M 77017688. 7701.

<1192>
AU THIELEMANN H.
YR 71.
TI PROBLEMS IN CHLORINE DIOXIDE TREATMENT OF DRINKING AND SURFACE WATERS POLLUTED WITH PHENOL.
TR ZUR PROBLEMATIK DER CHLORDIOXIDBEHANDLUNG PHENOLVERUNREINIGTER TRINK UND OBERFLACHENWASSER.
SO GESUND ING. 92. 10. P295-9. 10 OCT 71.
LG GE.
MJ CHLORINE.
MN CHROMATOGRAPHY-THIN-LAYER.
AN M 73015800.

<1193>
AU THIELEMANN H.
YR 70.
TI DETERMINATION OF TOXIC CYANIDE IONS IN THE WASTE WATER OF THE BIOLOGICAL PURIFYING PLANTS IN THE DISTRICT OF HALLE.
TR ZUR ERMITTLUNG TOXISCHER ZYANIDIONEN IM ABWASSER MECHANISCHER UND BIOLOGISHCER KLARANLAGEN DES BEZIRKES HALLE.
SO Z GESAMTE HYG. 16. 11. P835-7. NOV 70.
LG GE.
MJ CYANIDES: AN.
MN GERMANY-EAST.
AN M 71166029.

<1194>
AU THIELEMANN H.
YR 68.
TI WATER-HYGIENIC AND CHEMICAL STUDIES ON THE INCIDENCE AND IDENTIFICATION OF TASTE AFFECTING PHENOL COMPOUNDS IN BANK FILTERED SURFACE WATER AND GROUND WATER WITH SPECIAL REGARD TO THIN LAYER CHROMATOGRAPHIC TECHNIC OF EXAMINATION (HALLE-BEESEN WATER WORKS).
TR TRINKWASSERHYGIENISCHE BZW. CHEMISCHE UNTERSUCHUNGEN UBER VORKOMMEN UND IDENTIFIZIERUNG GESCHMACKSBEEINTRACHTIGENDER PHENOLVERBINDUNGEN IM UFERFILTRIERTEN OBERFLACHENWASSER UND GRUNDWASSER UNTER BERUCKSICHTIGUNG DUNNSCHICHTCHROMATOGRAPHISCHER UNTERSUCHUNGSMETHODIK (WASSERWERK HALLE-BEESEN).
SO Z GESAMTE HYG. 14. 12. P893-8. DEC 68.
LG GE.
MJ CHLORINE: AN. WATER-SUPPLY.
MN CHROMATOGRAPHY-THIN-LAYER.
AN M 69279072.

<1195>
AU THIELEMANN H.
YR 68.
TI ON THE ANALYTICAL VALUE OF THE SO-CALLED QUANTITATIVE BROMATOMETRIC DETERMINATION OF WATER VAPOR VOLATILE PHENOLS IN WASTE WATER OF SOME PURIFICATION PLANTS OF THE SEWAGE TREATMENT AREA OF HALLE AND SAALKREIS.
TR UBER DEN ANALYTISCHEN WERT DER SOGENANNTEN QUANTITATIVEN BROMATOMETRISCHEN BESTIMMUNG WASSERDAMPFFLUCHTIGER PHENOLE IM ABWASSER EINIGER KLARANLAGEN DES ABWASSERBEHANDLUNGSBEREICHES HALLE UND SAALKREIS.
SO Z GESAMTE HYG. 14. 7. P532-41. JUL 68.
LG GE.
MJ PHENOLS: AN.
MN GERMANY-EAST.
AN M 69157794.

<1196>
AU THIELEMANN, H.
IN HALBERSTADT. E. GER.
YR 73.
TI CONCENTRATION CHANGES IN PHENOL-CONTAINING STANDARDS DUE TO UV IRRADIATION.
SO MIKROCHIM. ACTA. P143-4. 1973.
LG GE.
DE PHENOL DECOMPN UV IRRADN WATER.
AN C 07922128983.

<1197>
AU THIELEMANN, H.
IN HALLE/SAALE. GER.
YR 72.
TI POSSIBLE PURIFICATION OF PHENOLIC WASTE WATERS AND EXPERIMENTAL LABORATORY RESEARCH RESULTS ON OXIDATION OR ADSORPTION OF PHENOLIC TEST SOLUTIONS ON INDUSTRIAL ASH ACCORDING TO THE AIR- ASH PROCEDURE

BY USING SEVERAL CATALYSTS.
SO Z. WASSER ABWASSER FORSCH. 5. P8-12. 1972.
LG GE.
DE PHENOLIC WASTE WATER PURIFN. CRESOL REMOVAL WASTE WATER. RESORCINOL REMOVAL WASTE WATER. FLUE DUST ASH PHENOLIC ACID. BOILER HOUSE ASH PHENOLIC ACID.
AN C 07704024546.

<1198>

AU THIELEMANN, H.
IN HALLE/SAALE. GER.
YR 71.
TI CHLORINE DIOXIDE TREATMENT OF DRINKING WATER (BANK FILTRATION) IN THE PRESENCE OF ORGANIC SUBSTANCES AND ESPECIALLY CONSIDERING PHENOL COMPOUNDS.
SO Z. WASSER ABWASSER FORSCH. 4. P42-8. 1971.
LG GE.
DE CHLORINE DIOXIDE WATER ORG. WATER TREATMENT CHLORINE DIOXIDE. ORG POLLUTANT WATER CHLORINE DIOXIDE.
AN C 07624144703.

<1199>

AU THIELEMANN, H.
YR 74. 6P.
TI IDENTIFICATION AND DETERMINATION OF 1,4-BENZOQUINONE IN WASTE WATERS FROM THE COAL-PROCESSING INDUSTRY.
PR PC$3.50/MF$2.25.
AB A NONBIODEGRADABLE AND TOXIC SUBSTANCE, (1,4-BENZOQUINONE) IN WASTE WATERS FROM THE COAL-PROCESSING INDUSTRY, CAN BE DETECTED BY THIN-LAYER CHROMATOGRAPHY WITH SOME TESTED SPRAY REAGENTS. THE MOST SENSITIVE REAGENT FOR DETECTION OF 1,4-BENZOQUINONE WAS FOUND TO BE A 2 PERCENT ETHANOL SOLUTION OF 4-AMINOANTIPYRINE (1-PHENYL-2,3-DIMETHYL-4-AMINOPYRAZOLONE-(5)). A METHOD FOR IDENTIFICATION OF 1,4-BENZOQUINONE OR A SEMIQUANTITATIVE DETERMINATION IS URGENTLY REQUIRED FOR TOXICOLOGICAL, HYDROBIOLOGICAL, AND CHEMICAL REASONS.
MJ BENZOQUINONES, THIN-LAYER-CHROMATOGRAPHY, COAL-INDUSTRY, WATER-POLLUTION.
MN AMMONIUM-COMPOUNDS, CHROMATOGRAPHY, CRESOLS, DRINKING- WATER, ETHANOL, HEALTH-HAZARDS, LUMINESCENCE, PHENOLS, POLYAMIDES, PYROCATECHOL, PYROGALLOL, REAGENTS, RESORCINOL, TOXICITY, BITUMINOUS- COAL.
ID ERDA-010800, ERDA-520200, ERDA-551100, WATER-ANALYSIS, WATER-POLLUTION-DETECTION, NTISERDA.
AN N ORNL-TR-2945.

<1200>

AU THIELEMANN, HORST.
IN HYG.-INST. MARTIN-LUTHER-UNIV. HALLE-WITTENBERG. HALLE/SAALE. E. GER.
YR 75.
TI BROMATOMETRIC DETERMINATION OF SIX ISOMERIC DIMETHYLPHENOLS (XYLENOLS) AND A TECHNICAL XYLENOL FRACTION ACCORDING TO A STANDARD ANALYTICAL METHOD.
SO Z. CHEM. 15. P73-4. 1975.
LG GE.
DE BROMATOMETRY XYLENOL DETN. BROMINATION XYLENOL DETN. XYLENOL DETN. TAR DISTILLATE ANALYSIS XYLENOL. WATER ANALYSIS XYLENOL.
AN C 08308071185.

<1201>

AU THOMPSON, J E. PITT, W W, JR. JOLLEY, R L.
IN OAK RIDGE NATIONAL LAB. OAK RIDGE TN 37830.
YR 77.
TI ORGANICS IN AQUEOUS PROCESS STREAMS OF A COAL CONVERSION BENCH- SCALE UNIT USING THE HYDROCARBONIZATION PROCESS: HPLC AND GC/MS ANALYSIS.
SO INSTITUTE OF ENVIRONMENTAL SCIENCES: 23RD ANNUAL TECHNICAL MEETING: PROCEEDINGS. MT. PROSPECT, ILL. INSTITUTE OF ENVIRONMENTAL SCIENCE, 1977. PP. 25-28.
LG EN.
AB NONE.
ID COAL HYDROCARBONIZATION, PHENOLS.
DE COAL, ORGANIC COMPOUNDS, AROMATIC COMPOUNDS, ULTRAVIOLET SPECTROSCOPY MASS SPECTROSCOPY, GAS CHROMATOGRAPHY, LIQUID CHROMATOGRAPHY.
AN P 7705266.

<1202>

AU THORNTON K. WILHM J.
YR 74.
TI THE EFFECTS OF PH PHENOL AND SODIUM CHLORIDE ON SURVIVAL AND CALORIC LIPID AND NITROGEN CONTENT OF A LABORATORY POPULATION OF CHIRONOMUS-ATTENUATUS.

SO HYDROBIOLOGIA. 45 (2-3). 261-280.
DE BACTERIA OIL POLLUTION CARBON-14.
AN B 59028855.

<1203>

AU THROOP W M. BOYLE W C.
YR 75.
TI PERPLEXING PHENOLS ALTERNATIVE METHODS FOR REMOVAL.
SO LANGWORTHY, VIRGIL W. (ED.). PROCEEDINGS OF THE THIRD ANNUAL POLLUTION CONTROL CONFERENCE OF THE WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION. INDUSTRY SOLUTIONS '75: AIR-WATER-NOISE-SOLID WASTE. APRIL 1-4, 1975. XI+915P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS, INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40114-2. 115-143.
DE BACTERIA POLLUTION WASTE WATER TREATMENT BIO OXIDATION ACTIVATED CARBON ADSORPTION CHLORINATION CHEMICAL OXIDATION OZONATION.
AN B 76029359.

<1204>

AU TIMOFEEVA, S. S. STOM, D. I.
IN A. A. ZHDANOV BIOL. SCI.-RES. INST. IRKUTSK. USSR.
YR 76.
TI SEPARATION OF POLYPHENOLS AND THEIR OXIDATION PRODUCTS IN WASTE WATERS BY THIN-LAYER CHROMATOGRAPHY.
SO ZH. ANAL. KHIM. 31. P198-200. 1976.
LG RS.
DE PHENOL THIN LAYER CHROMATOG WASTEWATER. PHENYLSULFONYL PHENOL CHROMATOG.
AN C 08510067638.

<1205>

AU TIN'YANOVA N Z. KVASNIKOV YE I.
YR 73.
TI OXIDATION OF NAPHTHALENE AND SALICYLIC-ACID BY BACTERIA FROM THE GENUS PSEUDOMONAS.
SO MIKROBIOL ZH (KYYIV). 35 (5). 550-553.
DE PSEUDOMONAS-AERUGINOSA PSEUDOMONAS-PUTIDA PSEUDOMONAS-BOREOPOLIS PSEUDOMONAS-FLUORESCENS GLUCOSE DEHYDROGENASE ACTIVITY TAWSON MINIMAL MEDIUM CARBON NUTRITION.
AN B 58021829.

<1206>

AU TKACHEVA, V. N. PROKOP'EVA, M. F. GALITSKAYA, N. B. STEBENEVA, I. G.
IN USSR.
YR 77.
TI CHROMATOGRAPHIC DETERMINATION OF FORMALDEHYDE IN WASTE WATERS.
SO ZAVOD. LAB. 43. P666-8. 1977.
LG RS.
DE FORMALDEHYDE WASTEWATER GAS CHROMATOG.
AN C 08716122375.

<1207>

AU TOFT H P.
TI POLLUTION OF FLOODPLAIN GRAVELS BY GAS WORKS WASTE.
SO COLE, JOHN A. (ED.). GROUNDWATER POLLUTION IN EUROPE. PROCEEDINGS OF A CONFERENCE. READING, ENGLAND, SEPT. 25-27, 1972. XI+547P. ILLUS. WATER INFORMATION CENTER, INC. PORT WASHINGTON, N.Y. U.S.A. ISBN 0-912394-12-9. 1974 (1975) 301-307.
DE HERTS ENGLAND INDUSTRIAL TAR ACIDS SULFATE SETTLEMENT SLUDGE OIL WATER REMEDIAL MEASURES WASTES.
AN B 75062360.

<1208>

AU TOMOYEDA, MIKIO. SHIMIZU, HIDEYO.
IN GIFU UNIV. KAGAMIHARA. JAPAN.
YR 70.
TI BIOCHEMICAL STUDIES ON ACETIC BACTERIA. VI. ACETIC ACID METABOLISM IN GLUCONOBACTER SUBOXYDANS.
SO GIFU DAIGAKU NOGAKUBU KENKYU HOKOKU. NO. 29. P177-84. 1970.
LG JA.
DE ACETOBACTER METAB. BACTERIA ACETOBACTER METAB. GLUCOSE ACETOBACTER METAB. ACETATE PRODN ACETOBACTER. ACID PRODN ACETOBACTER. FERMN ACETOBACTER.
AN C 07515095690.

<1209>

AU TOMOYEDA, MIKIO. SHIMIZU, HIDEYO. OHYA, MASAHIRO. HASEGAWA, MAKOTO
IN JAPAN.
YR 69.
TI BIOCHEMICAL STUDIES ON ACETIC ACID BACTERIA. 1. FUNDAMENTAL CULTURE CONDITIONS ON OVER-OXIDATION OF ACETIC ACID.
SO HAKKO KYOKAISHI. 27. P30-4. 1969.
LG JA.
DE ACETIC ACID DECOMPN ACETOBACTER.

ACETOBACTER ACETIC ACID DECOMPN.
AN C 07315074204.

<1210>
AU TONGE, G. M. HIGGINS, I. J.
IN BIOL. LAB. UNIV. KENT. CANTERBURY/KENT. ENGL.
YR 74.
TI MICROBIAL METABOLISM OF ALICYCLIC HYDROCARBONS. GROWTH OF NOCARDIA PETROLEOPHILA (NCIB 9438) ON METHYLCYCLOHEXANE.
SO J. GEN. MICROBIOL. 81, PT. 2. P521-4. 1974.
LG EN.
DE NOCARDIA METHYLCYCLOHEXANE METAB. CYCLOHEXANE METAB NOCARDIA. ALICYCLIC HYDROCARBON METAB NOCARDIA.
AN C 08111060671.

<1211>
AU TORPY M F.
YR 77.
TI ELECTRO PLATING AND CYANIDE WASTES.
SO J WATER POLLUT CONTROL FED. 49 (6). 1182-1188.
DE REVIEW FISH TOXICITY TREATMENT.
AN B 78018960.

<1212>
AU TORPY M F. MIDDLEBROOKS E J.
YR 76.
TI PLATING AND CYANIDE WASTES.
SO J WATER POLLUT CONTROL FED. 48 (6). 1295-1299.
DE WATER POLLUTION WASTE TREATMENT HEAVY METALS.
AN B 76094188.

<1213>
AU TOTH, K. NAGY, G. FEHER, Z. PUNGOR, E.
IN INST. GEN. ANAL. CHEM. TECH. UNIV. BUDAPEST. BUDAPEST. HUNG.
YR 76.
TI NOVEL ELECTROANALYTICAL TECHNIQUES FOR POLLUTION ANALYSIS.
SO FRESENIUS' Z. ANAL. CHEM. 282. P379-87. 1976.
LG EN.
DE CYANIDE DETN WATER. CHLORIDE DETN WATER. PHENOL DETN WATER. ELECTROANALYSIS POLLUTION.
AN C 08618126620.

<1214>
AU TRECCANI, V.
IN INST. AGRAR. TECH. MICROBIOL. UNIV. MILAN. MILAN. ITALY.
YR 74.
TI MICROBIAL DEGRADATION OF AROMATIC COMPOUNDS. INFLUENCE OF METHYL AND ALKYL SUBSTITUENTS.
SO FED. EUR. BIOCHEM. SOC. MEET. (PROC.). 30. P533-47. 1974.
LG EN.
DE REVIEW MICROORGANISM AROM COMPD DEGRDN. BIPHENYL DEGRDN MICROORGANISM REVIEW.
AN C 08219119437.

<1215>
AU TSAM Z S.
YR 75.
TI POSSIBILITY OF USING PHENOLIC RESINS IN HOUSEHOLD AND DRINKING WATER SUPPLY SYSTEMS.
SO GIG SANIT. (3). 117-118.
DE POLLUTION FORMALDEHYDE.
AN B 61023172.

<1216>
AU TSAYUN, G. P. YUDOVICH, E. E.
IN USSR.
YR 74.
TI COULOMETRIC DETERMINATION OF RESIDUAL PHENOL CONTENT IN PETROLEUM REFINERY WASTE WATERS.
SO KHIM. TEKHNOL. TOPL. MASEL. P55- 7. 1974.
LG RS.
DE PHENOL DETN WATER COULOMETRY. WASTEWATER ANALYSIS PHENOL COULOMETRY.
AN C 08116096092.

<1217>
AU TSOI, A. A. NIGMATULLINA, A. A.
IN USSR.
YR 71.
TI DETERMINATION OF PYRIDINE BASES IN INDUSTRIAL EFFLUENTS.
SO TR. NAUCH.-ISSLED. PROEKT. INST. OBOGASHCH. RUD TSVET. METAL. NO. 7. P135-42. 1971.
LG RS.
DE PYRIDINE BASE DETN WASTEWATER. WASTEWATER ANALYSIS PYRIDINE BASE.
AN C 08018099952.

<1218>
AU TSONOPOULOS, CONSTANTINE. COULSON,

DALE M. INMAN, LAWRENCE B.
IN EXXON RES. AND ENG. CO. FLORHAM PARK. N. J.
YR 76.
TI IONIZATION CONSTANTS OF WATER POLLUTANTS.
SO J. CHEM. ENG. DATA. 21. P190-3. 1976.
LG EN.
DE IONIZATION CONST PETROLEUM REFINERY WASTEWATER. AMMONIA IONIZATION CONST WASTEWATER. HYDROGEN SULFIDE IONIZATION CONST WASTEWATER. PHENOL IONIZATION CONST WASTEWATER. HYDROGEN CYANIDE IONIZATION CONST WASTEWATER. ETHYL MERCAPTAN IONIZATION CONST WASTEWATER. CYANIDE IONIZATION CONST WASTEWATER. SULFIDE IONIZATION CONST WASTEWATER. MERCAPTAN IONIZATION CONST WASTEWATER.
AN C 08424169233.

<1219>

AU TSUJI, MASAO. KUWAHARA, MASAAKI.
IN DEP. FOOD SCI. KAGAWA UNIV. KAGAWA. JAPAN.
YR 76.
TI BACTERIAL PRODUCTION OF CATECHOL FROM BENZOIC ACID. II. CHARACTERIZATION OF A MUTANT STRAIN FOR CATECHOL ACCUMULATION IN CORYNEBACTERIUM GLUTAMICUM.
SO HAKKO KOGAKU ZASSHI. 54. P789- 94. 1976.
LG JA.
DE CATECHOL CORYNEBACTERIUM BENZOATE.
AN C 08607041796.

<1220>

AU TSUYAMA, AKINORI.
IN NAGOYASHI KOGAI KENKYUJO. NAGOYA. JAPAN.
YR 73.
TI RAPID FIELD DETERMINATION OF FREE CYANIDE.
SO MIZU SHORI GIJUTSU. 14. P469-73. 1973.
LG JA.
DE CYANIDE DETN WATER. WATER ANALYSIS CYANIDE.
AN C 08002006628.

<1221>

AU TUBB, RICHARD A.
IN OREGON STATE UNIV. CORVALLIS. DEPT. OF FISHERIES AND WILDLIFE. CORVALLIS ENVIRONMENTAL RESEARCH LAB. OREG.
YR 77. 212P*.
TI RECENT ADVANCES IN FISH TOXICOLOGY - A SYMPOSIUM HELD IN CORVALLIS, OREGON ON JANUARY 13-14, 1977.
PR PC A10/MF A01.
AB CONTENTS: A MULTIPLE APPROACH TO SOLVING THE GAS SUPERSATURATION PROBLEM; EFFECTS OF KEPONE ON ESTUARINE ORGANISMS; COLLAGEN METABOLISM IN FISH EXPOSED TO ORGANIC CHEMICALS; EFFECTS OF SHORT-TERM EXPOSURES TO TOTAL RESIDUAL CHLORINE ON THE SURVIVAL AND BEHAVIOR OF LARGEMOUTH BASS (MICROPTERUS SALMOIDES); AN APPROACH FOR STUDYING THE EFFECTS OF MIXTURES OF ENVIRONMENTAL TOXICANTS ON WHOLE ORGANISM PERFORMANCES; RELATIONSHIP BETWEEN PH AND ACUTE TOXICITY OF FREE CYANIDE AND DISSOLVED SULFIDE FORMS TO THE FATHEAD MINNOW; THE ACUTE TOXICITY OF NITRITE TO FISHES; COPPER TOXICITY--A QUESTION OF FORM; THE ROLE OF CYANIDE AS AN ECOLOGICAL STRESSING FACTOR TO FISH; AN ASSESSMENT OF APPLICATION FACTORS IN AQUATIC TOXICOLOGY.
MJ MEETINGS, TOXICOLOGY, FISHES.
MN TOXICITY, AQUATIC-ANIMALS, GASES, SUPERSATURATION, COLLAGENS, METABOLISM, ORGANIC-COMPOUNDS, CHLORINE, CYANIDES, INORGANIC-SULFIDES, NITRITES, COPPER, WATER-QUALITY, ECOLOGY.
ID WATER-POLLUTION-EFFECTS-ANIMALS, KEPONE, NTISEPAORD.
AN N PB-273 500/9SL.

<1222>

AU TYCZKOWSKI, ANDRZEJ. RZYSKI, EDWARD. MROCZEK, STEFAN.
IN INST. INZ. CHEM. POLITECH. LODZ. LODZ. POL.
YR 76.
TI DEPHENOLIZATION OF WASTE WATERS FROM THE PRODUCTION OF SALICYLIC ACID IN A PULSATING EXTRACTION COLUMN.
SO PRZEM. CHEM. 55. P371-3. 1976.
LG PO.
DE PHENOL EXTN SALICYLIC ACID WASTEWATER.
AN C 08614095402.

<1223>

AU UETA, TADAHIKO. YAMAZOE, RITSUKO. MORI, KENICHIRO. SUZUKI, SUKEJI NISHIDA, SHIGEKAZU. TOTANI, TETSUYA.
IN TOKYO METROP. RES. PUBLIC HEALTH.

TOKYO. JAPAN.
YR 76.
TI GAS CHROMATOGRAPHIC DETERMINATION OF LOW LEVELS OF PHTHALIC ACID ESTERS IN FISH.
SO TOKYO-TORITSU EISEI KENKYUSHO KENKYU NEMPO. 27-1. P100-5. 1976.
LG JA.
DE PHTHALATE ESTER DETN FISH.
AN C 08703016584.

<1224>
AU UJHELYI, CS.
IN DEBRECEN. HUNG.
YR 75.
TI DETERMINATION OF THE BUTANOL CONTENT OF AQUEOUS SOLUTIONS OF MONO-N-BUTYL ORTHOPHOSPHORIC ACID IN DISTILLATE.
SO ATOMKI KOZL. 17. P1-7. 1975.
LG EN.
DE BUTANOL DETN AQ BUTYL PHOSPHATE. BUTYL PHOSPHATE SOLN ANALYSIS BUTANOL. REFRACTOMETRY BUTANOL DETN. DISTN BUTANOL DETN BUTYL PHOSPHATE.
AN C 08318157549.

<1225>
AU UMORIN P P.
YR 73.
TI PHENOL DEGRADATION BY BACTERIA IN THE PRESENCE OF INFUSORIA.
SO TR INST BIOL VNUTR VOD AKAD NAUK SSR. 24. 201-204.
DE ABSTRACT PARAMECIUM-CAUDATUM.
AN B 75006428.

<1226>
AU UMORIN, P. P.
IN INST. BIOL. INTERN. WATERS. BOROK. USSR.
YR 74.
TI DEGRADATION OF PHENOL BY THE PREDATOR-PREY SYSTEM.
SO ZH. OBSHCH. BIOL. 35. P119-26. 1974.
LG RS.
DE PHENOL BIODEGRDN.
AN C 08120126446.

<1227>
AU UMPELEV, V. L. KOGAN, L. A. GAGARINOVA, L. M.
IN EAST SCI. RES. CARBON-CHEM. INST. SVERDLOVSK. USSR.
YR 74.
TI SEPARATION OF POLYHYDRIC PHENOLS CONTAINED IN WASTE WATER BY THIN-LAYER CHROMATOGRAPHY.
SO ZH. ANAL. KHIM. 29. P179-80. 1974.
LG RS.
DE PHENOL POLYHYDRIC SEPN WASTEWATER.
AN C 08102006026.

<1228>
AU VAIDYANATHAN C S.
YR 76.
TI METABOLISM OF AROMATIC COMPOUNDS IN PLANTS AND MICROORGANISMS.
SO BIOCHEM REV (BANGALORE). 47. (RECD 1977) 1-11.
DE CICER-ARIETINUM TECOMA-STANS PSEUDOMONAS-FLUORESCENS BAUHENIA-MONANDRA ASPERGILLUS-NIGER ASPERGILLUS-NIDULANS TRYPTOPHAN SYNTHETASE MANDELATE DEHYDROGENASE PHENYL ACETATE HYDROXYLASE BENZOATE 4 HYDROXYLASE NADH ANTHRANILIC-ACID IRON III CATECHOL 2 3 DI HYDROXY BENZOIC-ACID.
AN B 77069979.

<1229>
AU VAISMAN Y I. BARIKHIN S Y.
YR 72.
TI USING THE ADSORPTION METHOD ON ACTIVATED CHARCOAL WITH CHLOROFORM EXTRACTION FOR EVALUATING WATER POLLUTION BY ORGANIC SUBSTANCES.
SO GIG SANIT. 37 (3). 77-79.
DE USSR.
AN B 56005104.

<1230>
AU VANDERMEULEN J H. AHERN T P.
YR 76.
TI EFFECT OF PETROLEUM HYDRO CARBONS ON ALGAL PHYSIOLOGY REVIEW AND PROGRESS REPORT.
SO LOCKWOOD, A. P. M. (ED.). SOCIETY FOR EXPERIMENTAL BIOLOGY SEMINAR SERIES, VOL. 2. EFFECTS OF POLLUTANTS ON AQUATIC ORGANISMS. SEMINAR. LIVERPOOL, ENGLAND, APRIL 11, 1975. X+193P. ILLUS. CAMBRIDGE UNIVERSITY PRESS: NEW YORK, N.Y. USA; CAMBRIDGE, ENGLAND. ISBN 0-521-21103-4(CLOTH); ISBN 0-521-29044-9(PAPER). 107-125.
DE OILS ATP PRODUCTION NAPHTHALENE PHOTOSYNTHESIS POLLUTANT TOXICITY.
AN B 77045236.

<1231>
AU VANOSSI, LORENZO.
IN ITALY.

YR 74.
TI PRESENCE OF PHENOLS IN WATERS.
SO IND. ALIMENT. (PINEROLO, ITALY). 13. P73-4. 1974.
LG IT.
DE PHENOL POLLUTION NATURAL WATER.
AN C 08124158484.

<1232>

AU VARGA, JANOS M. NEUJAHR, HALINA Y.
IN DEP. PURE APPL. BIOCHEM. R. INST. TECHNOL. STOCKHOLM. SWED.
YR 70.
TI ISOLATION FROM SOIL OF PHENOL-UTILIZING ORGANISMS AND METABOLIC STUDIES ON THE PATHWAYS OF PHENOL DEGRADATION.
SO PLANT SOIL. 33. P565-71. 1970.
LG EN.
DE PHENOL METAB SOIL MICROBES. SOIL MICROBES PHENOL METAB.
AN C 07411050808.

<1233>

AU VEBER, N. V. GAEVA, N. N. KASHKOV, V. K.
IN USSR.
YR 75.
TI OXIDATION OF ACRYLONITRILE WITH OZONE IN AQUEOUS SOLUTIONS.
SO TR. VNII VODOSNABZH. KANALIZ. GIDROTEKHN. SOORUZH. I INZH. GIDROGEOL. P61-6. 1975.
LG RS.
DE ACRYLONITRILE OXIDN OZONE. OXIDN WASTEWATER OZONE NITRILE.
AN C 08604021526.

<1234>

AU VEBER, N. V. TSEL'NIKER, D. I. YAKOBSON, B. V. CHERNYAKINA, A. F. ALEEVA, N. N.
IN USSR.
YR 75.
TI PURIFICATION OF WASTE WATERS DURING PRODUCTION OF PHENOL- FORMALDEHYDE RESINS BY CATALYTIC OXIDATION IN THE VAPOR-GAS PHASE.
SO PLAST. MASSY. P43-4. 1975.
LG RS.
DE PHENOL FORMALDEHYDE RESIN MANUF WASTEWATER.
AN C 08314120382.

<1235>

AU VEITH G D. AUSTIN N M.
YR 76.
TI DETECTION AND ISOLATION OF BIO ACCUMULABLE CHEMICALS IN COMPLEX EFFLUENTS.
SO KEITH, LAWRENCE H. IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER. CONGRESS. MEXICO CITY, MEXICO, DEC. 1975. X+718P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40131-2. 297- 302.
DE MINNOW WATER POLLUTION ALCOHOLS ACIDS AMINES ESTERS ETHERS HYDRO CARBONS PHENOLS PESTICIDES POLY CHLORINATED BI PHENYLS REVERSE PHASE HIGH PRESSURE LIQUID CHROMATOGRAPHY.
AN B 77007298.

<1236>

AU VEITH, GILMAN D. KONASEWICH, DENNIS E.
IN INTERNATIONAL JOINT COMMISSION-UNITED STATES AND CANADA, WINDSOR (ONTARIO). STANDING COMMITTEE ON THE SCIENTIFIC BASIS FOR WATER QUALITY CRITERIA.
YR 75. 329P.
TI STRUCTURE-ACTIVITY CORRELATIONS IN STUDIES OF TOXICITY AND BIOCONCENTRATION WITH AQUATIC ORGANISMS.
NT PROCEEDINGS OF A SYMPOSIUM HELD IN BURLINGTON, ONTARIO AT THE CANADA CENTER FOR INLAND WATERS, MARCH 11-13, 1975.
PR PC A15/MF A01.
AB THE PUBLICATION PRESENTS THE PROCEEDINGS OF A SYMPOSIUM WHICH DISCUSSED THE POTENTIAL OF STRUCTURE- ACTIVITY CORRELATIONS IN STUDIES OF TOXICITY AND BIOCONCENTRATION OF CHEMICALS WITH AQUATIC ORGANISMS. THE SYMPOSIUM CONSISTED OF FORMAL PAPERS ON THE APPLICATIONS OF STRUCTURE-ACTIVITY MODELS IN LABORATORY TESTING AS WELL AS MODELS CONCERNED WITH THE PROBLEMS OF MULTIPLE TOXICITY AND PERIODIC EXPOSURES.
MJ MEETINGS, TOXICITY.
MN MOLECULAR-STRUCTURE, ECOLOGY, DISTRIBUTION, EXPOSURE, MATHEMATICAL-MODELS, FISHES, PESTICIDES, TOXICOLOGY, SURFACTANTS, DAPHNIA, ACCUMULATION, DDT, AQUATIC-BIOLOGY, PHENOL, ORGANIC-COMPOUNDS, CHEMICAL-PROPERTIES.
ID TOXIC-SUBSTANCES, BIOACCUMULATION, ANALYTICAL- METHODS, WATER-POLLUTION-EFFECTS- ANIMALS, NTISEPAL.

AN N PB-275 670/8SL.

<1237>

AU VELA G R. RAINEY J G.
YR 76.
TI MICROBIOLOGICAL DEGRADATION OF PHENOL IN THE EFFLUENT FROM A WOOD TREATMENT PLANT.
SO TEX J SCI. 27 (1). 197-206.
DE BACTERIA POLLUTANTS AUTO PURIFICATION TEMPERATURE AERATION POPULATIONS.
AN B 62036798.

<1238>

AU VELDRE, I. A. NORMAN, KH. K. SALIEV, V. P.
YR 74. 5P.
TI CHARACTERISTICS OF THE TOXIC ACTION OF PROPYL PHENOL ISOMERS AND THEIR SAFE LEVELS IN WATER BODIES.
AV TRANSLATION.
PR PC$3.50/MF$2.25.
AB THRESHOLD CONCENTRATIONS (PERCEPTION THRESHOLD) OF PROPYL PHENOL ISOMERS FOR ORGANOLEPTIC PROPERTIES THAT ARE NOXIOUS ARE: OPP, 0.01 MG/LITER FOR ODOR, ODOR IN HEATING, AND CHLORINATION; PPP, 0.025 MG/LITER FOR ODOR, TASTE IN HEATING, AND CHLORINATION. THRESHOLD CONCENTRATIONS OF PROPYL PHENOL ISOMERS ACCORDING TO THE EFFECT ON PUBLIC HEALTH REGIMES OF RESERVOIRS MAY BE TAKEN AS 1 MG/LITER. THE COMBINED EVALUATION OF THE RESULTS OF EXPERIMENTS SUGGESTS THAT THE LIMITING INDEX OF NOXIOUS PROPERTIES OF PROPYL PHENOL ISOMERS IS THE ORGANOLEPTIC ONE. THE CONCENTRATIONS OF BOTH ISOMERS (OPP AND PPP) SHOULD BE LIMITED TO 0.01 MG/LITER IN RESERVOIRS.
MJ PHENOLS, TOXICITY, SHALE-TARS, TOXICITY.
MN ISOMERS, ORGANOLEPTIC- PROPERTIES, PUBLIC-HEALTH, USSR, WATER.
ID ERDA-041000, ERDA-560305, ERDA-520200, TRANSLATIONS, NTISERDA.
AN N ORNL-TR-2995.

<1239>

AU VELDRE, I. V.
IN ENVIRONMENTAL PROTECTION AGENCY, RESEARCH TRIANGLE PARK, N.C. TRANSLATION SERVICES SECTION.
YR 72. 15P.
TI EXPERIMENTAL BASIS FOR MAXIMUM PERMISSIBLE CONCENTRATIONS OF CERTAIN SHALE PHENOLS IN THE WATER OF RESERVOIRS.
NT TRANS. OF MONO. EKSPERIMENTALNOE OBOSNOVANIE PREDELNO DOPUSTIMYKH KONTSENTRATSII NEKOTORYKH SLANTSEVYKH FENOLOV V VODE VODOEMOV, TALLIN, 1972 P84-93. (PC A02/MF A01).
PR PC A02/MF A01.
AB THE REPORT DISCUSSES THE MAXIMUM CONCENTRATIONS OF PHENOLS THAT SHOULD BE ALLOWED IN OIL SHALE PROCESSING WATERS. IT REVIEWS MEDICAL STUDIES ON THESE PHENOLS WHICH LED TO THESE CONCENTRATION STANDARDS.
MJ PHENOLS, TOXICOLOGY, WATER-POLLUTION.
MN REVIEWS, STANDARDS, MAXIMUM-PERMISSIBLE-EXPOSURE, OIL-SHALE, TRANSLATIONS, USSR, CRESOLS.
ID OIL-SHALE-PROCESSING, NTISEPAISD.
AN N PB-258 921-T/SL.

<1240>

AU VELDRE, INGEBORG.
IN USSR.
YR 72.
TI EFFECT OF THE STRUCTURE AND PHYSICOCHEMICAL QUALITIES OF SOME PHENOLS ON THEIR BIOLOGICAL ACTIVITY.
SO GIG. TR. PROF. PATOL. EST. SSR. NO. 8. P145-54. 1972.
LG RS.
DE DIMETHYLPHENOL TOXICOL. SHALE WATER PHENOL TOXICOL.
AN C 07923133446.

<1241>

AU VELDRE, INGEBORG. KIRSO, U.
IN USSR.
YR 70.
TI STABILITY OF 5-METHYLRESORCINOL IN AN AQUEOUS SOLUTION.
SO VOP. GIG. TR. PROF. PATOL. EST. SSR. NO. 2. P184-8. 1970.
LG RS.
DE ORCINOL DECOMPN TOXICITY. RESORCINOLS OXIDN TOXICITY. PHENOLS OXIDN TOXICITY.
AN C 07411051749.

<1242>

AU VERNETTI, J B.
IN RHODIA, INC. CHIPMAN DIV. PORTLAND, OR.

YR 75.
TI ANALYZER KEEPS CLOSE TABS ON PHENOL DISCHARGED FROM HERBICIDE PLANT.
SO CHEMICAL PROCESSING. CHICAGO, 38(1): 12, JAN. 1975.
LG EN.
AB NONE.
ID HERBICIDE INDUSTRY, PORTLAND.
DE CHEMICAL INDUSTRY WASTES, EFFLUENTS, HERBICIDES, MONITORING METHODS, MONITORING SYSTEMS, OREGON.
AN P 7503443.

<1243>
AU VLASOVA, Z. G.
IN USSR.
YR 73.
TI POSSIBILITY OF BIOCHEMICAL REMOVAL OF COMPLEX CYANIDES FROM EFFLUENTS IN THE WINTER AS ILLUSTRATED BY THE EFFLUENTS OF THE ZOLOTUSHINSK CONCENTRATION PLANT.
SO TR. N.-I. I PROEKT. IN-T PO OBOGASHCH. RUD. TSVET. MET. KAZMEKHANOBR . P71-4. 1973.
LG RS.
DE CYANIDE REMOVAL WASTEWATER BIOL.
AN C 08326209208.

<1244>
AU VOLBORTH, A.
IN NORTH DAKOTA STATE UNIV. FARGO. RESEARCH AND DEVELOPMENT ADMINISTRATION. 9504362 1135000.
YR 76. 38P.
TI OXIDATION OF COAL.
PR PC A03/MF A01.
AB CERTAIN ORGANIC COMPOUNDS ARE OXIDIZED MORE READILY THAN OTHERS. THE EASE WITH WHICH AN ORGANIC SUBSTANCE WILL OXIDIZE DEPENDS ON THE FUNCTIONAL GROUPS PRESENT IN THE MOLECULE. OXIDATION OF COAL IS AFFECTED BY INCORPORATION OF OXYGEN FUNCTIONAL GROUPS, SUCH AS THE PEROXIDE, THE HYDROXYL, THE ALDEHYDE, THE CARBONYL, THE CARBOXYL, THE ETHER LINKAGE, AND THE METHOXYL GROUPS. ONCE OXYGEN HAS BEEN COMBINED WITH AN ORGANIC MOLECULE, FURTHER OXIDATION MAY OCCUR MORE READILY. COMPOUNDS WITH OXYGEN FUNCTIONAL GROUPS ATTACHED ARE MORE SUSCEPTIBLE TO FURTHER OXIDATION THAN THEIR PROGENITORS. FOR EXAMPLE, ALCOHOL AND ACETALDEHYDE OXIDIZE MORE READILY THAN ETHANE, PHENOL AND NAPHTHOL MORE EASILY THAN BENZENE AND NAPHTHALENE, AND BENZALDEHYDE MORE READILY THAN TOLUENE. SATURATED AND PURELY AROMATIC HYDROCARBONS ARE MORE DIFFICULT TO OXIDIZE THAN THEIR DERIVATIVES CONTAINING OXYGEN FUNCTIONAL GROUPS. THE FORMATION OF PEROXIDE APPEARS TO BE ONE OF THE INITIAL STEPS OF COAL OXIDATION; IT CAN LEAD THEN TO THE FORMATION OF OTHER OXYGEN FUNCTIONAL GROUPS. THE WEATHERING OF COAL INCREASES THE CONCENTRATION OF THE OXYGEN FUNCTIONAL GROUPS, AND SOME REDUCTION OF CARBON CONTENT RESULTS, TECHNOLOGICAL QUALITY OF COAL CHANGES, WATER CONTENT INCREASES, AND ALKALI-SOLUBLE PRODUCTS SIMILAR TO THE HUMIC ACIDS FORM, AS WELL AS WATER-SOLUBLE LOWER MOLECULAR WEIGHT ACIDS. IN THE EARLY STAGES OF OXIDATION OXYGEN IS BEING ADDED TO THE COAL BULK COMPOSITION AND WATER IS LOST, WHILE DURING THE LATER STAGES OF HUMIFICATION OF COAL, CO SUB 2, CO, AND H SUB 2 O EVOLVE. THE OXIDATION PROCEEDS ALONG THE PERIPHERY OF THE MACROMOLECULE CLUSTERS IN COAL AND AFFECTS THE C--C BONDS, RUPTURING THE AROMATIC RINGS. FURTHER OXIDATION REACTIONS ARE DESCRIBED. (ERA CITATION 02: 047200).
MJ COAL, OXIDATION.
MN CHEMICAL-REACTION-YIELD, CHEMICAL-REACTIONS, ORGANIC-OXYGEN-COMPOUNDS, WEATHERING.
ID ERDA-010600, ERDA-400300, NTISERDA.
AN N COO-2989-3.

<1245>
AU VOLODIN, V M. LUKYANENKO, V I. FLEROV, B A.
YR 71.
TI COMPARATIVE CHARACTERISTICS OF FISH RESISTANCE TO PHENOL IN EARLY STAGES OF DEVELOPMENT.
SO NEWFOUNDLAND. MEMORIAL UNIVERSITY, ST. JOHNS. LIBRARY BULLETIN, 5(2): 16, MARCH 1971.
LG EN.
AB NONE.
ID BREAM, SUMMARY ONLY.
DE PHENOL, TOXICITY, FISHES.
AN P 7006934.

<1246>
AU VOLODIN, V. M.
IN USSR.
YR 73.

TI EFFECT OF PHENOL ON DEVELOPMENT OF FISH EMBRYOS.
SO TR. INST. BIOL. VNUTR. VOD. AKAD. NAUK SSSR. NO. 24. P67-71. 1973.
LG RS.
DE PHENOL TOXICITY DANIO EMBRYOS. FISH EMBRYO PHENOL TOXICITY.
AN C 08017091779.

<1247>
AU VOLOSHINA, A. I.
IN USSR.
YR 71.
TI DETERMINATION OF SOME ORGANIC COMPOUNDS IN WASTE WATERS BY A GAS-LIQUID CHROMATOGRAPHIC METHOD.
SO METODY KHIM. ANAL. STOKOV VOD PREDPR. KHIM. PROM. P6-17. 1971.
LG RS.
AV DOROFEENKO, G. N.
DE ORG DETN WASTE WATER. WASTE WATER ANALYSIS ORG. ALDEHYDE DETN WASTE WATER. DIOXANE DETN WASTE WATER. ACROLEIN DETN WASTE WATER. HYDROCARBON DETN WASTE WATER. ALC DETN WASTE WATER.
AN C 07814088404.

<1248>
AU VOROB'EVA L I. KOZYREVA L F. LISENKOVA L L.
YR 67.
TI EFFECT OF LIGHT ON METABOLISM OF PROPIONIC BACTERIA.
TR VLIIANIE SVETA NA OBMEN VESHCHESTV PROPIONOVOKISLYKH BAKTERII.
SO MIKROBIOLOGIIA. 36. 3. P410-5. MAY-JUN 67.
LG RS.
MJ LIGHT.
MN CYTOCHROMES: RE. OXIDATION-REDUCTION.
AN M 69159178.

<1249>
AU VORONIN A M. KOCHETKOV V. STAROVOITOV I I. SKRIABIN G K.
YR 77.
TI PLASMIDS PBS2 AND PBS3 CONTROLLING NAPHTHALENE OXIDATION BY BACTERIA OF THE GENUS PSEUDOMONAS.
TR PLAZMIDY PBS2 I PBS3, KONTROLIRUIUSHCHIE OKISLENIE NAFTALINA U BAKTERII RODA PSEUDOMONAS.
SO DOKL AKAD NAUK SSSR. 237. 5. P1205-8. 11 DEC 77.
LG RS.
MJ NAPHTHALENES: ME.
MN CATECHOLS: ME. GE.
AN M 78063824. 7804.

<1250>
AU WAIBEL M.
YR 76.
TI AIR AND WATER CONTAMINATION BY 3 4 BENZ PYRENE FROM ROAD ABRASION.
SO ZENTRALBL BAKTERIOL PARASITENKD INFEKTIONSKR HYG ERSTE ABT ORIG REIHE B HYG BETRIEBSHYG PRAEV MED. 163 (5-6). (RECD 1977) 458-469.
DE WASTE WATER DUST TAR ASPHALT SEWAGE POLLUTION.
AN B 64029623.

<1251>
AU WAKEHAM, S T.
IN SWISS FEDERAL INST. FOR WATER RESOURCES AND WATER POLLUTION CONTROL, (EAWAG), CH-8600 DUEBENDORF, SWITZ.
YR 77.
TI SYNCHRONOUS FLUORESCENCE SPECTROSCOPY AND ITS APPLICATION TO INDIGENOUS AND PETROLEUM-DERIVED HYDROCARBONS IN LACUSTRINE SEDIMENTS.
SO ENVIRONMENTAL SCIENCE & TECHNOLOGY, 11(3): 272-276, MAR. 1977.
LG EN.
AB NONE.
ID LAKE WASHINGTON, SPECTROFLUOROMETRY, PERYLENE.
DE WASHINGTON STATE, LAKES, EMISSION SPECTROSCOPY, LUMINESCENCE, SEDIMENTS, HYDROCARBONS, PETROLEUM WASTES.
AN P 7704287.

<1252>
AU WALKER J D. COLWELL R R.
IN DEPARTMENT OF MICROBIOLOGY, UNIVERSITY OF MARYLAND, COLLEGE PARK, MARYLAND.
YR 76.
TI ENUMERATION OF PETROLEUM- DEGRADING MICROORGANISMS.
SO APPL ENVIRON MICROBIOL. 31. 2. P198-207. FEB 76.
LG EN.
MJ BACTERIA: IP.
MN AMPHOTERICIN-B: PD. COMPARATIVE-STUDY. MARYLAND. STREPTOMYCIN: PD. UNITED-STATES-GOVERNMENT-SUPPORTED-NON-NIH: (NON-NIH-SUP).
AN M 77064460. 7703.

<1253>

AU WALKER, J D. COLWELL, R R.
IN UNIV. OF MARYLAND, DEPT. OF MICROBIOLOGY, COLLEGE PARK, 20742.
YR 76.
TI MEASURING THE POTENTIAL ACTIVITY OF HYDROCARBON-DEGRADING BACTERIA.
SO APPLIED AND ENVIRONMENTAL MICROBIOLOGY, 31(2): 189-197, FEB. 1976.
LG EN.
AB NONE.
ID CYCLOHEXANE, C-14, NAPHTHALENE, HEXADECANE, TOLUENE.
DE RADIOISOTOPES, PETROLEUM, OIL POLLUTION CONTROL, MARINE ENVIRONMENTS, HYDROCARBONS, ESTUARIES, BIODEGRADATION, BACTERIA.
AN P 7604277.

<1254>

AU WALKER, J. D. AUSTIN, H. F. COLWELL, R. R.
IN MARYLAND UNIV COLLEGE PARK DEPT OF MICROBIOLOGY RESEARCH, ARLINGTON, VA. 407304.
YR 74. 13P.
TI UTILIZATION OF MIXED HYDROCARBON SUBSTRATE BY PETROLEUM-DEGRADING MICROORGANISMS.
AV PUB. IN JNL. OF GENERAL AND APPLIED MICROBIOLOGY, V21 P27-39 1975. 1, 20.
PR PC$3.25/MF$2.25.
AB THIS REPORT DESCRIBES THE FIRST COMPARATIVE STUDY OF PETROLEUM-DEGRADING YEASTS, FUNGI, AND BACTERIA, AND THEIR ABILITY TO DEGRADE TO MIXED HYDROCARBON SUBSTRATE. THE MIXED HYDROCARBON SUBSTRATE EMPLOYED CONTAINED ALIPHATIC, ALICYCLIC, AROMATIC, AND POLYNUCLEAR AROMATIC HYDROCARBONS. MOST OF THE BACTERIA AND ALL OF THE YEASTS AND FUNGI WERE ISOLATED FROM CHESAPEAKE BAY. NORMAL ALKANES WERE FOUND TO BE LESS SUSCEPTIBLE TO DEGRADATION BY BACTERIA AND YEASTS AS THE CARBON CHAIN LENGTH OF THE HYDROCARBON INCREASED FROM 10 TO 20. RESULTS OBTAINED FOR SOME OF THE FUNGI SHOWED THAT THERE WAS LITTLE CORRELATION BETWEEN CHAIN LENGTH OF NORMAL ALKANE AND SUSCEPTIBILITY TO BIODEGRADATION. CUMENE, NAPHTHALENE, PHENANTHRENE, PRISTANE, 1,2-BENZANTHRACENE, PERYLENE, AND PYRENE WERE FOUND TO BE DEGRADED BY MICROORGANISMS. IN GENERAL THE PATTERNS OBSERVED FOR HYDROCARBON UTILIZATION WERE SIMILAR FOR THE BACTERIA, YEASTS, AND FUNGI. HOWEVER, THE UTILIZATION OF HYDROCARBONS BY INDIVIDUAL ISOLATES VARIED SIGNIFICANTLY. SUCH INFORMATION MAY PROVE USEFUL IN ASSESSING THE HYDROCARBON-DEGRADING POTENTIAL OF MICROORGANISMS.
MJ MICROORGANISMS, BIODETERIORATION, PETROLEUM- PRODUCTS, OIL-POLLUTION, WATER- POLLUTION, CHESAPEAKE-BAY, ALKANES.
MN BACTERIA, YEASTS, FUNGI, AROMATIC-COMPOUNDS, REPRINTS.
ID NTISDODXR, NTISDODN.
AN N AD-A016 324/6SL.

<1255>

AU WALLWORK, J. F. BENTLEY, M. SYMONDS, D. C.
IN SOUTHAMPTON C.B.C WATERWORKS. SOUTHAMPTON. ENGL.
YR 69.
TI IDENTIFICATION OF PHENOLS IN THE RIVER TEST AND THEIR TREATMENT WITH CHLORINE DIOXIDE.
SO WATER TREAT. EXAM. 18. P203-19. 1969.
LG EN.
DE PHENOLS DETN RIVER WATERS. RIVER WATERS PHENOLS DETN. GAS LIQ CHROMATOG PHENOLS. CHROMATOG PHENOLS RIVER WATERS. CHLORINE DIOXIDE PHENOLS POTABLE WATER. POTABLE WATER CL DIOXIDE PHENOLS.
AN C 07210047250.

<1256>

AU WALSH, D. F. ARMSTRONG, J. G. BARTLEY, T. R. SALMAN, H. A. FRANK, P. A.
IN ENG. RES. CENT. BUR. RECLAMATION. DENVER. COLO.
YR 77.
TI RESIDUES OF EMULSIFIED XYLENE IN AQUATIC WEED CONTROL AND THEIR IMPACT ON RAINBOW TROUT.
PG 24 PP.
LG EN.
DE XYLENE HERBICIDE TOXICITY RAINBOW TROUT. SALMO XYLENE HERBICIDE TOXICITY. FISH XYLENE HERBICIDE TOXICITY.
AN C 08721162467.

<1257>

AU WARD D M. BROCK T D.
IN DEPARTMENT OF BACTERIOLOGY,

UNIVERSITY OF WISCONSIN, MADISON, WISCONSIN 53706.
YR 76.
TI ENVIRONMENTAL FACTORS INFLUENCING THE RATE OF HYDROCARBON OXIDATION IN TEMPERATE LAKES.
SO APPL ENVIRON MICROBIOL. 31. 5. P764-72. MAY 76.
LG EN.
MJ BACTERIA: ME.
MN ALKANES: ME. OXIDATION- REDUCTION. UNITED-STATES-GOVERNMENT-SUPPORTED-NIH: (NIH-SUP). WATER-POLLUTION-CHEMICAL.
AN M 76204528. 7609.

<1258>

AU WARD, DAVID M. BROCK, THOMAS D.
IN WISCONSIN UNIV. MADISON. WATER RESOURCES CENTER. RESEARCH AND TECHNOLOGY, WASHINGTON, D.C. WISCONSIN UNIV. MADISON. DEPT. OF BACTERIOLOGY.
YR 75. 112P.
TI ENVIRONMENTAL LIMITATIONS ON THE MICROBIAL DEGRADATION OF HYDROCARBONS IN TEMPERATE LAKES.
NT TECHNICAL REPT.
PR PC$5.25/MF$2.25.
AB NUTRITIONALLY VERSATILE HETEROTROPHIC BACTERIA INHABIT LAKES AND DEVELOP IN RESPONSE TO HYDROCARBON INTRODUCTION. HOWEVER, THE RESPONSE OF NATURALLY-OCCURRING OIL-DEGRADING MICROORGANISMS DEPENDS ON ENVIRONMENTAL CONDITIONS WITHIN A LAKE. THE RATE OF HYDROCARBON BIODEGRADATION VARIED SEASONALLY IN LAKE MENDOTA BECAUSE OF TEMPERATURE LIMITATION IN SPRING AND FALL AND NUTRIENT LIMITATION IN MID-SUMMER, AND WAS OPTIMAL FOR ONLY ONE MONTH DURING THE YEAR. NUTRIENT LIMITATION WAS ALSO OBSERVED IN LAKES OF VARYING NUTRIENT CONTENT IN VILAS COUNTY. RELATIONSHIPS BETWEEN HYDROCARBON OXIDATION RATES AND TEMPERATURE OR NUTRIENT LEVELS WERE SHOWN BY CORRELATION AND EXPERIMENTALLY. OPTIMUM CONDITIONS WERE ALSO ESTABLISHED. HEXADECANE OXIDATION WAS INHIBITED IN LAKE WATER AND SEDIMENT SAMPLES INCUBATED ANAEROBICALLY. ACETATE INHIBITION WAS INDIRECTLY CAUSED BY DEPLETION OF NITROGEN AND PHOSPHORUS BY ACETATE-OXIDIZING BACTERIA. GLUCOSE INHIBITION OCCURRED IN THE PRESENCE OF EXCESS NITROGEN AND PHOSPHORUS AND MAY RESULT FROM REGULATORY INTERFERENCE SUCH AS CATABOLITE REPRESSION.
MJ LAKE-MENDOTA, BIODETERIORATION, HYDROCARBONS, BACTERIA.
MN SEASONAL-VARIATIONS, TEMPERATURE, WISCONSIN, LAKES, GLUCOSE, NUTRIENTS, OXIDATION, NITROGEN, PHOSPHORUS, ORGANIC- COMPOUNDS, WATER-QUALITY, TAXONOMY, ACETATES.
ID OIL-POLLUTION-REMOVAL, WATER-POLLUTION-CONTROL, HETEROTROPHS, MICROBIAL-DEGRADATION, NTISDIOWRT.
AN N PB-244 094/9SL.

<1259>

AU WARNER J S.
YR 76.
TI DETERMINATION OF ALIPHATIC AND AROMATIC HYDRO CARBONS IN MARINE ORGANISMS.
SO ANAL CHEM. 48 (3). 578-583.
DE MUSSEL LOBSTER CLAM OYSTER FISH SHRIMP ABALONE CRAB STARFISH SEA-URCHIN BLOODWORM CAUSTIC DIGESTION ETHER EXTRACTION SILICA GEL CHROMATOGRAPHY GAS CHROMATOGRAPHY CHEMICAL IONIZATION MASS SPECTROMETRY.
AN B 62011380.

<1260>

AU WASIK, STANLEY P. TSANG, WING.
IN NATL. BUR. STAND. WASHINGTON. D. C.
YR 70.
TI DETERMINATION OF TRACE AMOUNTS OF CONTAMINANTS IN WATER BY ISOTOPE DILUTION GAS CHROMATOGRAPHY.
SO ANAL. CHEM. 42. P1649-51. 1970.
LG EN.
DE WATER ANAL BENZENE. BENZENE TRACES DETN WATER. ISOTOPE DILN BENZENE MICRODETN. GAS CHROMATOG BENZENE ISOTOPES. CHROMATOG GAS BENZENE ISOTOPES.
AN C 07402006271.

<1261>

AU WATANABE, IKUO. OKITA, TOSHIICHI.
IN INST. PUBLIC HEALTH. TOKYO. JAPAN.
YR 74.
TI IDENTIFICATION OF THE COMPOUNDS EVAPORATING FROM WASTE WATERS OF PETROCHEMICAL PLANTS.
SO TAIKI OSEN KENKYU. 9. P13-20. 1974.
LG JA.
DE PETROCHEM WASTEWATER ORG COMPD DETN. HYDROCARBON DETN PETROCHEM WASTEWATER. SULFIDE DETN PETROCHEM

WASTEWATER. CHLOROHYDROCARBON DETN PETROCHEM WASTEWATER. ETHER DETN PETROCHEM WASTEWATER. VOLATILE SUBSTANCE DETN WASTEWATER.
AN C 08504025114.

<1262>
AU WATSON G K. CAIN R B.
YR 75.
TI MICROBIAL METABOLISM OF THE PYRIDINE RING METABOLIC PATHWAYS OF PYRIDINE BIO DEGRADATION BY SOIL BACTERIA.
SO BIOCHEM J. 146 (1). 157-172.
DE BACILLUS-SP NOCARDIA-SP ENZYMES.
AN B 59066258.

<1263>
AU WATSON G K. CAIN R B.
YR 72.
TI METABOLISM OF PYRIDINE BY BACTERIA.
SO BIOCHEM J. 127. 2. P44P. APR 72.
LG EN.
MJ BACILLUS: ME.
MN CHROMATOGRAPHY-PAPER.
AN M 73015615.

<1264>
AU WATSON G K. HOUGHTON C. CAIN R B.
YR 74.
TI MICROBIAL METABOLISM OF THE PYRIDINE RING. THE HYDROXYLATION OF 4-HYDROXYPYRIDINE TO PYRIDINE-3,4-DIOL (3,4-DIHYDROXYPYRIDINE) BY 4-HYDROXYPYRIDINE-3-HYDROXYLASE.
SO BIOCHEM J. 140. 2. P265-76. MAY 74.
LG EN.
MJ AGROBACTERIUM: ME.
MN AMMONIUM-SULFATE. FAD: ME. HYDROXYLATION. RIBOFLAVIN: ME. ULTRASONICS.
AN M 75127332.

<1265>
AU WATSON G K. JONES N.
YR 77.
TI THE BIO DEGRADATION OF POLY ETHYLENE GLYCOLS BY SEWAGE BACTERIA.
SO WATER RES. 11 (1). 95-100.
DE ACINETOBACTER FLAVOBACTERIUM PSEUDOMONAS MINERAL SALTS MEDIUM.
AN B 63068452.

<1266>
AU WEAVER T L. DUGAN P R.
YR 72.
TI ENHANCEMENT OF BACTERIAL METHANE OXIDATION BY CLAY MINERALS.
SO NATURE (LOND). 237 (5357). 518.
DE NOTE AQUATIC ECOSYSTEM.
AN B 73028946.

<1267>
AU WEBB M. RUBER H. LEDUC G.
YR 76.
TI THE TOXICITY OF VARIOUS MINING FLOTATION REAGENTS TO RAINBOW TROUT SALMO-GAIRDNERI.
SO WATER RES. 10 (4). 303-306.
DE SODIUM ETHYL XANTHATE POTASSIUM AMYL XANTHATE XYLENOL POLY PROPYLENE GLYCOL SODIUM ISO PROPYL XANTHATE POTASSIUM ETHYL XANTHATE MEDIAN LETHAL CONCENTRATION.
AN B 62034743.

<1268>
AU WEDEMEYER, GARY.
IN WEST. FISH DIS. LAB. U. S. BUR. SPORT FISH. WILDL. SEATTLE. WASH.
YR 71.
TI STRESS OF FORMALIN TREATMENTS IN RAINBOW TROUT (SALMO GAIRDNERI) AND COHO SALMON (ONCORHYNCHUS KISUTCH).
SO J. FISH. RES. BD. CAN. 28. P1899-904. 1971.
LG EN.
DE FORMALIN FISH TOXICITY. TROUT FORMALIN TOXICITY. SALMON FORMALIN TOXICITY.
AN C 07621122583.

<1269>
AU WEDEMEYER, GARY. YASUTAKE, W. T.
IN WEST. FISH. DIS. LAB. BUR. SPORT FISH. WILDL. SEATTLE. WASH.
YR 74.
TI STRESS OF FORMALIN TREATMENT IN JUVENILE SPRING CHINOOK SALMON (ONCORHYNCHUS TSHAWYTSCHE) AND STEELHEAD TROUT (SALMO GAIRDNERI).
SO J. FISH. RES. BOARD CAN. 31. P179-84. 1974.
LG EN.
DE FORMALIN TOXICITY FISH. SALMO FORMALIN TOXICITY. ONCORHYNCHUS FORMALIN TOXICITY.
AN C 08215093773.

<1270>
AU WEIL, L. BERGER, H. QUENTIN, E.
IN INST. WASSERCHEM. CHEM. BALNEOL. TECH. UNIV. MUENCHEN. MUNICH. GER.
YR 76.

TI ELIMINATING LIPOPHILIC POLLUTANTS IN WATER TREATMENT.

SO DECHEMA-MONOGR. 80. P105-14. 1976.

LG GE.

DE POLYETHYLENE FLOCCULATION WATER PURIFN. PESTICIDE REMOVAL WATER. POLYCYCLIC HYDROCARBON REMOVAL WATER.

AN C 08622160979.

<1271>

AU WEIL, L. GREINER, G.

IN INST. WASSERCHEM. CHEM. BALNEOL. TECH. UNIV. MUENCHEN. MUNICH. GER.

YR 74.

TI PRINCIPLES OF THE ELIMINATION OF ORGANIC WATER POLLUTANTS WITH POLYETHYLENE.

SO VOM WASSER. 43. P247-57. 1974.

LG GE.

DE POLYETHYLENE FLOCCULATION WATER. VINYL ACYLAMIDE FLOCCULATION WATER. FLOCCULATION WATER POLYETHYLENE.

AN C 08310084622.

<1272>

AU WHITELEY F R. KIVES J J. HECHT H D.

YR 75.

TI CONTINUOUS ON-LINE DETERMINATION OF TOTAL CYANIDE IN INDUSTRIAL EFFLUENT STREAMS.

SO LANGWORTHY, VIRGIL W. (ED.). PROCEEDINGS OF THE THIRD ANNUAL POLLUTION CONTROL CONFERENCE OF THE WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION. INDUSTRY SOLUTIONS '75: AIR-WATER-NOISE-SOLID WASTE. APRIL 1-4, 1975. XI+915P. ILLUS. ANN ARBOR SCIENCE PUBLISHERS, INC. ANN ARBOR, MICH. U.S.A. ISBN 0-250-40114-2. 633-647.

DE WATER POLLUTION TOXICITY ANALYSIS.

AN B 76029382.

<1273>

AU WHITTLE K J. MACKIE P R.

YR 76.

TI HYDRO CARBONS IN MARINE ZOO PLANKTON AND FISH PART 2 FISH HYDRO CARBON LEVELS.

SO LOCKWOOD, A. P. M. (ED.). SOCIETY FOR EXPERIMENTAL BIOLOGY SEMINAR SERIES, VOL. 2. EFFECTS OF POLLUTANTS ON AQUATIC ORGANISMS. SEMINAR. LIVERPOOL, ENGLAND, APRIL 11, 1975. X+193P. ILLUS. CAMBRIDGE UNIVERSITY PRESS: NEW YORK, N.Y. USA; CAMBRIDGE, ENGLAND. ISBN 0-521-21103-4(CLOTH); ISBN 0-521-29044-9(PAPER). 85-105.

DE LIVER MUSCLE TOXICITY BEHAVIOR UPTAKE METABOLISM TAINTING DIET ALKANES PETROLEUM PRODUCTS BENZO A PYRENE.

AN B 77045235.

<1274>

AU WILDISH D J.

YR 74.

TI ARRESTANT EFFECT OF POLY OXY ETHYLENE ESTERS ON SWIMMING IN THE WINTER FLOUNDER.

SO WATER RES. 8 (8). 579-583.

DE PSEUDOPLEURONECTES-AMERICANUS WATER POLLUTION OIL DISPERSANT BEHAVIOR RESPONSES ENDOGENOUS TIDAL RHYTHM SUPPRESSION SWIMMING AMPLITUDE REDUCTION.

AN B 59028883.

<1275>

AU WILDISH, D J.

IN FISHERIES RESEARCH BOARD OF CANADA, BIOLOGICAL STATION, ST. ANDREWS, N.B.

YR 72.

TI ACUTE TOXICITY OF POLYOXYETHYLENE ESTERS AND POLYOXY ETHYLENE ETHERS TO S. SALAR AND G. OCEANICUS.

SO WATER RESEARCH. NEW YORK. 6(7): 759-762, JULY 1972.

LG EN.

AB NONE.

ID OIL DISPERSANTS, *GAMMARUS OCEANICUS, *SALMO SALAR, POLYOXYETHYLENE ESTERS, ETHERS.

DE TOXICITY, FISH, CRUSTACEANS, SURFACTANTS.

AN P 7300076.

<1276>

AU WILHM, JERRY.

IN OKLAHOMA WATER RESOURCES RESEARCH INST. STILLWATER.

YR 71. 48P.

TI COMPARISON OF ENERGY FLOW PARAMETERS OF MIDGE POPULATIONS IN BIOLOGICAL OXIDATION PONDS (EFFECT OF PHENOL ON OXYGEN UPTAKE RATE OF A LABORATORY POPULATION OF CHIRONOMUS ATTENUATUS WALK.) 1,2).

NT TECHNICAL RESEARCH COMPLETION REPT.

PR PC$3.00/MF$0.95.

AB A LABORATORY POPULATION OF FOURTH-INSTAR LARVAL FORMS OF

CHIRONOMUS ATTENUATUS WALKER RECEIVED A CONTINUOUS LIFE-LONG EXPOSURE OF 0, 3, 8, 11, 16 AND 22 PPM PHENOL. WATER TEMPERATURE, PH AND DISSOLVED OXYGEN CONCENTRATION WERE MONITORED. EXPOSED LARVAE WERE ANALYZED FOR OVEN-DRY WEIGHT, ASH-FREE WEIGHT, CALORIC CONTENT, AND OXYGEN UPTAKE. CALORIC CONTENT PER GRAM IN LARVAE INCREASED WITH INCREASING PHENOL CONTENT UP TO A MAXIMUM OF 5,869 CAL/G IN LARVAE EXPOSED TO 16 PPM PHENOLS. LINEAR EQUATIONS WERE FORMULATED TO RELATE ENERGY CONTENT TO PHENOL LEVEL AND ENERGY CONTENT AND DISTANCE DOWNSTREAM FROM AN OUTFALL. LARVAE WERE ALSO EXPOSED TO 6 DIFFERENT SALT CONCENTRATIONS BETWEEN 0 AND 342 MM/L FOR 4 DIFFERENT TIME PERIODS. CONCENTRATION OF SODIUM IN THE HAEMOLYMPH WAS SIMILAR IN LARVAE EXPOSED TO THE LOWER CONCENTRATIONS AND INCREASED PROGRESSIVELY AT THE THREE HIGHER CONCENTRATIONS, WHILE CHLORIDE LEVELS INCREASED STEADILY WITH INCREASING SALT CONCENTRATION.

MJ LAGOONS-PONDS, ECOLOGY, DIPTERA, ECOLOGY, WATER-POLLUTION, ECOLOGY, PHENOL, FRESH-WATER-BIOLOGY.

MN LARVAE, SODIUM-CHLORIDE, TEMPERATURE, INDUSTRIAL-WASTE-TREATMENT, BIOCHEMICAL-OXYGEN-DEMAND, TOXICITY, ENERGY.

ID CHIRONOMUS, OWRR.

AN N PB-204 524.

<1277>

AU WILHM, JERRY. THORNTON, KENT W.

IN OKLAHOMA WATER RESOURCES RESEARCH INST. STILLWATER.

YR 72. 19P.

TI THE EFFECTS OF PH, PHENOL, AND SODIUM CHLORIDE ON THE BIOENERGETICS OF LABORATORY POPULATIONS OF 'CHIRONOMUS ATTENUATUS'.

NT RESEARCH PROJECT TECHNICAL COMPLETION REPT.

PR PC$3.00/MF$0.95.

AB CONTINUOUS FLOW, LABORATORY MICROCOSMS WERE USED TO MEASURE THE EFFECTS OF PH, PHENOL, AND NACL ON THE SURVIVAL OF THE LIFE STAGES OF CHIRONOMUS ATTENUATUS, THE CALORIC CONTENT OF THIRD AND FOURTH INSTAR LARVAE AND ADULTS, THE LIPID AND PROTEIN-NITROGEN CONTENT OF FOURTH INSTAR LARVAE, AND THE INTERACTION AMONG THE VARIOUS RESPONSES. EACH EXPERIMENT CONSISTED OF 24 TREATMENT COMBINATIONS WITH A 3 X 4 X 2 FACTORIAL ARRANGEMENT IN A COMPLETELY RANDOMIZED DESIGN WITH TWO REPLICATIONS OF EACH TREATMENT. TREATMENT VARIABLES WERE PH AT 6.2, 7.2, AND 8.2; PHENOL AT 0, 10, 20, AND 30 MG/L; AND NACL AT 0 AND 600 MG/L. PH HAD A SIGNIFICANT EFFECT ON THE SURVIVAL OF ALL LIFE STAGES OF C. ATTENUATUS. INCREASING PHENOL LEVELS RESULTED IN A NEARBY LINEAR INCREASE IN CALORIC CONTENT. SODIUM CHLORIDE AFFECTED THE LIPID CONTENT OF FOURTH INSTAR LARVAE. THE LIPID CONTENT WAS HIGHER WITH NACL PRESENT IN THE MEDIA THAN WITHOUT NACL. INTERACTION HAD A SIGNIFICANT EFFECT ON ALL RESPONSES EXCEPT SURVIVAL OF THIRD AND FOURTH INSTAR LARVAE. (AUTHOR).

MJ DIPTERA, PETROLEUM-REFINING, WATER-POLLUTION, PETROLEUM.

MN ECOLOGY, METABOLISM, PHYSIOLOGY, PH, PHENOLS, LIPIDS, LAGOONS-PONDS, LIFE-CYCLES, EXPERIMENTAL-DATA.

ID CHIRONOMUS-ATTENUATUS, WATER-POLLUTION-EFFECTS-ANIMALS, BIOENERGETICS, OIL-POLLUTION.

AN N PB-214 479/8.

<1278>

AU WILLIAMSON, KENNETH J.

IN OREGON STATE UNIV. CORVALLIS. WATER RESOURCES RESEARCH INST. OREGON STATE UNIV. CORVALLIS. DEPT. OF CIVIL ENGINEERING. RESEARCH AND TECHNOLOGY, WASHINGTON, D.C.

YR 76. 48P.

TI A BIOASSAY TO ASSESS WASTEWATER TOXICITY TO AEROBIC BIOLOGICAL TREATMENT.

NT COMPLETION REPT. 1 JUL 75-30 JUN 76. PREPARED BY OREGON STATE UNIV. CORVALLIS. DEPT. OF CIVIL ENGINEERING.

PR PC A03/MF A01.

AB THE OBJECTIVE WAS TO DEVELOP A BIOASSAY FOR WASTEWATER TOXICITY THAT COULD BE USED AT SEWAGE TREATMENT PLANTS. NITROBACTER WAS USED AS THE TEST ORGANISM DUE TO THE SIMPLICITY OF QUANTIFYING SUBSTRATE REMOVAL RATES BY MEASURING NITRITE REMOVAL, A SENSITIVITY FOR MOST TOXICANTS GREATER THAN THAT OF HETEROTROPHIC ORGANISMS, AND A SLOW GROWTH RATE WHICH ENABLES THE USE OF BATCH-FED TESTS. A METHOD WAS DEVELOPED FOR PRESERVING THE NITROBACTER ORGANISMS BY FREEZE-

DRYING. SUBSTRATE REMOVAL RATES WERE MEASURED FOR BOTH FREEZE-DRIED AND NON-FREEZE-DRIED NITROBACTER IN THE PRESENCE OF A HEAVY METAL AND AN ORGANIC TOXICANT. ZINC AND 2,4,5-TRICHLOROPHENOL EXHIBITED TOXIC EFFECTS TO THE NITROBACTER AT CONCENTRATIONS COMPARABLE TO THOSE TOXIC TO ACTIVATED SLUDGE.
MJ TOXICITY, BIOASSAY, SEWAGE.
MN AEROBIC-PROCESSES, NITROBACTER, ACTIVATED-SLUDGE-PROCESS, METALS, ZINC, TOXICOLOGY, NITRITES, SEWAGE-TREATMENT, BACTERICIDES, PHENOLS, FREEZE-DRYING.
ID BIOINDICATORS, HEAVY-METALS, PHENOL-TRICHLORO, POISONING-CHEMICAL-REACTIONS, NTISDIOWRT.
AN N PB-261 304/1SL.

<1279>
AU WILLIS, RAYMOND BRUCE.
IN IOWA STATE UNIVERSITY (0097) PH.D. 1973, 112PP.
YR 73.
TI HIGH-PRESSURE LIQUID CHROMATOGRAPHY OF PHENOLS AND METAL IONS.
SO DAI V34(07), SEC B, P3141.
DE CHEMISTRY, ANALYTICAL (0486).
AN D ADG74-00585.

<1280>
AU WILLOX, S. WEATHERBY, R. P. HOLDER, G. M.
IN DEP. PHARM. UNIV. SYDNEY. SYDNEY. AUST.
YR 76.
TI ANILINE METABOLISM IN TWO SPECIES OF ARACHNIDA: WATER-SOLUBLE METABOLITES.
SO XENOBIOTICA. 6. P565-73. 1976.
LG EN.
DE ANILINE METAB BOOPHILUS. NEPHILIA ANILINE METAB.
AN C 08617114922.

<1281>
AU WILLS R B.
YR 72.
TI GAS CHROMATOGRAPHIC RESPONSE TO INJECTIONS OF ACETIC ACID IN WATER.
SO J CHROMATOGR SCI. 10. 9. P582-3. SEP 72.
LG EN.
MJ ACETIC-ACIDS: AN.
MN CHEMISTRY-PHYSICAL.
AN M 73006384.

<1282>
AU WILSON S A. WEBER J H.
YR 77.
TI ESR ANALYSIS OF SEMI QUINONE FREE RADICALS OF AQUATIC AND SOIL FULVIC-ACID AND HUMIC-ACID.
SO ANAL LETT. 10 (1). 75-84.
DE OYSTER RIVER PODZOL SOIL P BENZO SEMI QUINONE REDUCING CAPABILITY.
AN B 64072070.

<1283>
AU WINTERS K. O'DONNELL R. BATTERTON J C. VAN BAALEN C.
YR 76.
TI WATER SOLUBLE COMPONENTS OF 4 FUEL OILS CHEMICAL CHARACTERIZATION AND EFFECTS ON GROWTH OF MICRO ALGAE.
SO MAR BIOL (BERL). 36 (3). 269-276.
DE AGMENELLUM-QUADRUPLICATUM THALASSIOSIRA-PSEUDONANA NAPHTHALENES BENZENES PHENOLS ANILINES INDOLES POLLUTION INHIBITORY EFFECT P TOLUIDINE BLUE-GREEN ALGAE GREEN ALGAE DIATOMS USA TOXICITY DAMAGE REDUCED PRIMARY PRODUCTION.
AN B 62068946.

<1284>
AU WINTERS, KENNETH. BATTERTON, JOHN C. VAN BAALEN, CHASE.
IN MAR. SCI. INST. UNIV. TEXAS. PORT ARANSAS. TEX.
YR 77.
TI PHENALEN-1-ONE: OCCURRENCE IN A FUEL OIL AND TOXICITY TO MICROALGAE.
SO ENVIRON. SCI. TECHNOL. 11. P270- 2. 1977.
LG EN.
DE PHENOLENEONE TOXICITY ALGAE LIGHT. FUEL OIL PHENALENEONE ISOLATION.
AN C 08621151154.

<1285>
AU WISLOCKI P G. WOOD A W. CHANG R L. LEVIN W. YAGI H. HERNANDEZ O. DANSETTE P M. JERINA D M. CONNEY A H.
YR 76.
TI MUTAGENICITY AND CYTO TOXICITY OF BENZO A PYRENE ARENE OXIDES PHENOLS QUINONES AND DI HYDRO DIOLS IN BACTERIAL AND MAMMALIAN CELLS.
SO CANCER RES. 36 (9). 3350-3357.
DE CHINESE HAMSTER V-79 CELLS SALMONELLA-TYPHIMURIUM TA-98 STRAIN TA-100 STRAIN TA-1538 STRAIN

CARCINOGENS.
AN B 63002990.

<1286>
AU WISSING F.
IN DEPARTMENTS OF BIOCHEMISTRY AND ELECTRON MICROSCOPY, THE ROYAL DENTAL COLLEGE, DK 8000 ARHUS C, DENMARK.
YR 75.
TI CYANIDE PRODUCTION FROM GLYCINE BY A HOMOGENATE FROM A PSEUDOMONAS SPECIES.
SO J BACTERIOL. 121. 2. P695-9. FEB 75.
LG EN.
MJ CYANIDES: BI.
MN BUFFERS. HYDROGEN-ION-CONCENTRATION. PHENAZINES: ME. SUBCELLULAR-FRACTIONS: UL.
AN M 75095466.

<1287>
AU WODZINSKI R S. LAROCCA D.
YR 77.
TI BACTERIAL GROWTH KINETICS ON DI PHENYL METHANE AND NAPHTHALENE HEPTA METHYL NONANE MIXTURES.
SO APPL ENVIRON MICROBIOL. 33 (3). 660-665.
DE PSEUDOMONAS-SPP HYDROGENOMONAS-SP.
AN B 64016619.

<1288>
AU WOLKOFF, A. W. LAROSE, R. H.
IN CANADA CENT. INLAND WATERS. BURLINGTON. ONT.
YR 75.
TI SENSITIVE MONITORING OF PHENOLS AFTER LIQUID CHROMATOGRAPHY. REPLY TO COMMENTS.
SO J. CHROMATOGR. 111. P472-3. 1975.
LG EN.
DE PHENOL DETN WATER. CREATE OXIDATIVE MONITOR PHENOL DETN.
AN C 08426184549.

<1289>
AU WOLKOFF, AARON W. LAROSE, RICHARD H.
IN CANADA CENT. INLAND WATERS. DEP. ENVIRON. BURLINGTON. ONT.
YR 74.
TI HIGHLY SENSITIVE TECHNIQUE FOR THE LIQUID CHROMATOGRAPHIC ANALYSIS OF PHENOLS AND OTHER ENVIRONMENTAL POLLUTANTS.
SO J. CHROMATOGR. 99. P731-43. 1974.
LG EN.
DE PHENOL DETN WATER. ENVIRONMENT PHENOL DETN. LIQ CHROMATOG PHENOL WATER.
AN C 08126175800.

<1290>
AU WOLVERTON B C. MCKOWN M M.
YR 76.
TI WATER-HYACINTHS FOR REMOVAL OF PHENOLS FROM POLLUTED WATERS.
SO AQUAT BOT. 2 (3). 191-201.
DE EICHHORNIA-CRASSIPES.
AN B 63017778.

<1291>
AU WOOLHISER, P. H. CLARK, D. P.
IN THIOKOL CHEMICAL CORP BRIGHAM CITY UTAH. 348850.
YR 73. 93P*.
TI CYANIDE WASTE TREATMENT UTILIZING CATALYTIC OXIDATION.
NT TECHNICAL REPT. 23 MAY-25 APR 73.
AV 1.
PR PC$3.75/MF$1.45.
AB ELECTROPLATING OPERATIONS AND COLOR PHOTOGRAPH PROCESSING ARE TWO MAJOR SOURCES OF LIQUID CYANIDE WASTES. TO MEET STATE EFFLUENT STANDARDS, A SYSTEM USING A PROPRIETARY COBALT-BASED CATALYST AND CHLORINE-PRODUCING ELECTROLYTIC CELLS WAS EVALUATED WITH ACTUAL PHOTOGRAPHIC AND ELECTROPLATING WASTE. A LITERATURE SEARCH AND LABORATORY EVALUATION WAS CONDUCTED TO DETERMINE PROCESSES THAT COULD BE USED TO SUPPLEMENT THE CATALYTIC OXIDATION SYSTEM. A PROTOTYPE CATALYTIC OXIDATION SYSTEM CAPABLE OF TREATING 1/4 GALLON PER MINUTE (GPM) OF 2,000 MG/1 TOTAL CYANIDE WASTE PRODUCED EFFLUENT STREAMS CONTAINING UNDETECTABLE AMOUNTS OF CYANIDE (UNDER 0.01 MG/1) WITH COPPER PLATING AND NICKEL STRIP FEEDS. TREATMENT OF PHOTOGRAPHIC WASTES PRODUCED AN 87 TO 94 PERCENT REDUCTION OF TOTAL CYANIDE. THE CATALYTIC OXIDATION SYSTEM HAS A STRONG POTENTIAL FOR DECREASING THE OPERATION COSTS OF CYANIDE DESTRUCTION SYSTEMS. SYSTEM DESIGNS ARE GIVEN FOR TWO FULL-SIZE CYANIDE WASTE TREATMENT SYSTEMS. (MODIFIED AUTHOR ABSTRACT).
MJ CYANIDES, WASTE-TREATMENT.
MN PROTOTYPES, ELECTROPLATING, WASTES-INDUSTRIAL, PHOTOGRAPHIC-

PROCESSING, CATALYSTS, OXIDATION, COBALT, REVIEWS, CYANATES, CHLORINE, COLORIMETRIC-ANALYSIS, CHEMICAL-ANALYSIS, ELECTROLYSIS, PRECIPITATION, CHLORINATION, DESIGN, CONTROL, WATER-POLLUTION, COST-ESTIMATES, FABRICATION.
ID PERFORMANCE-EVALUATION, ION-SELECTIVE-ELECTRODES, WATER-POLLUTION-CONTROL, INDUSTRIAL-WASTE-TREATMENT, AF.
AN N AD-769 293/2.

<1292>
AU WRONSKI, MIECZYSLAW. SMAL, ZBIGNIEW.
IN DEP. CHEM. TECHNOL. UNIV. LODZ. LODZ. POL.
YR 74.
TI THIOMERCURIMETRIC DETERMINATION OF ACRYLONITRILE IN WATER.
SO CHEM. ANAL. (WARSAW). 19. P633- 8. 1974.
LG PO.
DE SURFACE WATER ANALYSIS ACRYLONITRILE. ACRYLONITRILE DETN SURFACE WATER.
AN C 08126175988.

<1293>
AU WU, D -C. CHIANG, Y -M. CHANG, H -T. TAN, T -H. LI, Y -H. HUNG, T -C. CHU, P -C.
YR 74.
TI THE AQUATIC ENVIRONMENT AND ECOLOGY OF THE KAOHSIUNG HARBOR.
SO T'AI-WAN TA HSUEH. T'AI-PEI. NUNG HSUEH YUAN. SPECIAL PUBLICATION 5, DEC. 1974. 77PP.
LG CH.
AB NONE.
ID PHENOLS, KAOHSIUNG HARBOR.
DE COLIFORMS, ARSENIC, DO, TAIWAN, HARBORS, ENVIRONMENTAL DETERIORATION, PHYTOPLANKTON, OIL POLLUTION, NUTRIENTS, MERCURY.
AN P 7601437.

<1294>
AU WURM, HANS J.
IN EMSCHERGENOSS. ESSEN. GER.
YR 76.
TI EXTRACTION OF PHENOLS FROM COKING-PLANT EFFLUENTS.
SO CHEM.-ING.-TECH. 48. P840-5. 1976.
LG GE.
DE COKING WASTEWATER PHENOL EXTN.
AN C 08612078239.

<1295>
AU YANG R D. HUMPHREY A E.
IN DEPARTMENT OF CHEMICAL AND BIOCHEMICAL ENGINEERING, UNIVERSITY OF PENNSYLVANIA, PHILADELPHIA, PENNSYLVANIA.
YR 75.
TI DYNAMIC AND STEADY STATE STUDIES OF PHENOL BIODEGRADATION IN PURE AND MIXED CULTURES.
SO BIOTECHNOL BIOENG. 17. 8. P1211- 35. AUG 75.
LG EN.
MJ PHENOLS.
MN COMPARATIVE-STUDY. WATER-POLLUTANTS-CHEMICAL.
AN M 78040734. 7803.

<1296>
AU YANYSHEVA N YA. KOSTOVETSKII YA I. FEDORENKO Z P.
YR 74.
TI STANDARDIZATION OF THE CONTENT OF BENZO A PYRENE IN WATER BODIES.
SO GIG SANIT. (7). 71-75.
DE MOUSE HUMAN CARCINOGEN STOMACH TUMORS POLLUTION.
AN B 59056263.

<1297>
AU YARUSHEK N E.
YR 73.
TI QUANTITY OF BACTERIA AND DESTRUCTION OF ORGANIC MATTER IN BOTTOM DEPOSITS OF THE SARATOV WATER STORAGE BASIN.
SO GIDROBIOL ZH. 9 (1). 83-85.
DE USSR MICROORGANISM COUNT SAPROPHYTE PHENOL DEGRADING BACTERIA DENITRIFYING BACTERIA SLIME OXYGEN.
AN B 58013161.

<1298>
AU YOCUM, FLOYD HENRY, II.
IN TULANE UNIVERSITY, SCHOOL OF ENGINEERING (0494) D.ENG. 1977, 285PP.
YR 77.
TI OXIDATION OF STYRENE WITH OZONE IN AQUEOUS SOLUTION.
SO DAI V38(03), SEC B, P1316.
DE ENGINEERING, CHEMICAL (0542).
AN D ADG77-19511.

<1299>
AU YOKOYAMA, KAZUO. SATO, SADAO. YOSHIYASU, IKUYO. IMAMURA, TAKASHI.
IN CENT. RES. LAB. MITSUBISHI ELECTR.

CORP. AMAGASAKI. JAPAN.
YR 74.
TI DEGRADATION OF ORGANIC SUBSTANCES IN WATER BY OZONE.
SO MITSUBISHI DENKI GIHO. 48. P1233- 8. 1974.
LG JA.
DE OZONE DEGRDN ORG SUBSTANCE WATER. POLYETHYLENE GLYCOL DEGRDN OZONE. CHLORINATED BIPHENYL DEGRDN OZONE.
AN C 08214089803.

<1300>
AU YOUNG L Y. MITCHELL R.
YR 73.
TI NEGATIVE CHEMOTAXIS OF MARINE BACTERIA TO TOXIC CHEMICALS.
SO APPL MICROBIOL. 25. 6. P972-5. JUN 73.
LG EN.
MJ CHEMOTAXIS: DE.
MN ALCOHOL-ETHYL: PD. CHLOROFORM: PD. DE, GD.
AN M 73212992.

<1301>
AU YOUNG, D R. DUNN, B P.
IN UNIV. OF BRITISH COLUMBIA, CANCER RESEARCH CENTRE, DEPT. OF ZOOLOGY, 2075 WESBROOK PL. VANCOUVER, B. C. V6T 1W5, CAN.
YR 76.
TI BASELINE LEVELS OF BENZO(A)PYRENE IN SOUTHERN CALIFORNIA MUSSELS.
SO MARINE POLLUTION BULLETIN, 7(12): 231-234, DEC. 1976.
LG EN.
AB NONE.
ID MUSSELS, BENZO(A)PYRENE.
DE WATER POLLUTANTS, PETROCHEMICALS, CARCINOGENS, AROMATIC COMPOUNDS, MUNICIPAL WASTEWATERS, CALIFORNIA COAST.
AN P 7702212.

<1302>
AU YOUNG, RODERICK W. PARR, O. D. DICKINSON, JEAN K.
IN VIRGINIA POLYTECHNIC INST. AND STATE UNIV. BLACKSBURG. WATER RESOURCES RESEARCH CENTER. WASHINGTON, D.C.
YR 75. 24P.
TI RESIDUE-REMOVAL METHODS FOR PESTICIDES AND INDUSTRIAL CHEMICALS FOUND IN AQUATIC ENVIRONMENTS.
PR PC$3.50/MF$2.25.
AB THIS RESEARCH EVALUATED VARIOUS METHODS THAT HAVE BEEN ADVANCED FOR SEPARATION OF POLYCHLOROBIPHENYLS FROM CHLORINATED PESTICIDES, TO SEE WHICH WERE EFFECTIVE IN DETECTING AND REMOVING THESE RESIDUES OFTEN PRESENT IN THE AQUATIC ENVIRONMENT. PRELIMINARY INVESTIGATIONS ALSO WERE MADE OF A NEW APPROACH, THE SILYLATION OF CARBAMATES. FINALLY, A GAS CHROMATOGRAPHIC (GLC) PROCEDURE FOR CHLOROPHACINONE (CPN) WAS DEVELOPED BY BROMINATING THE PARENT COMPOUND.
MJ WATER-POLLUTION-CONTROL, PESTICIDES, CHLORINE-AROMATIC- COMPOUNDS, WATER-ANALYSIS.
MN BIPHENYL, CHLORINE-AROMATIC-COMPOUNDS, CARBAMATES, GAS-CHROMATOGRAPHY, CHEMICAL-ANALYSIS, EXTRACTION, SEPARATION, INDUSTRIAL-WASTES, HAZARDOUS-MATERIALS, SILANES, SILICON-INORGANIC-COMPOUNDS, DDT, BROMINATION.
ID BIPHENYL-CHLORO, WATER-POLLUTION-DETECTION, INDAN-DIONE-P-CHLOROPHENYLPHENYLACETYL, AROCHLORS, POLYCHLORINATED-BIPHENYLS, NTISDIOWRT.
AN N PB-250 747/3SL.

<1303>
AU ZAMFIR G. NASTASE V.
IN HYGIENE AND PUBLIC HEALTH INSTITUTE--IASSY.
YR 75.
TI PROTECTION OF DRINKING WATER SOURCES AGAINST MODERN POLLUTANTS.
SO J HYG EPIDEMIOL MICROBIOL IMMUNOL (PRAHA). 19. 1. P5-9. 1975.
LG EN.
MJ WATER-POLLUTION-CHEMICAL: PC.
MN AMMONIA. NITRITES. AN.
AN M 75152253.

<1304>
AU ZDYBIEWSKA, M.
YR 68. 22P.
TI MICROBIOLOGICAL DEGRADATION OF PHENOL COMPOUNDS.
AV TRANSLATED FROM POSTEPY MIKROBIOL.
PR PC$3.50/MF$2.25.
AB REASONS FOR THE OCCURRENCE OF PHENOLS, ESPECIALLY IN WATER AND SEWAGE, ARE DISCUSSED. THESE COMPOUNDS DISTINCTLY AFFECT THE BIOCOENOSIS OF THE RECEIVER BOTH IN RESPECT TO HIGHER ORGANISMS, AS E.G. FISH, AS WELL AS TO MICROORGANISMS. THANKS TO ADAPTATION SOME MICROORGANISMS BECOME ABLE TO

DECOMPOSE PHENOLS. USUALLY THE BIOLOGICAL OXIDIZATION OF VARIOUS CYCLIC COMPOUNDS IS ACHIEVED BY FORMING PYROCATECHOL, WHICH IS THEN OXIDIZED TO SIMPLE ORGANIC ACIDS. THESE PROCESSES ARE DUE TO BACTERIA, ACTINOMYCETES, MOULDS AND YEAST. THEY ARE INFLUENCED BY SUCH PARAMETERS AS: PH, TEMPERATURE, NUTRITIVE SUBSTANCES AS WELL AS SUBSTANCES ASSOCIATED IN THE PHENOLS. THE SUITABLE CHOICE OF THESE PARAMETERS ENSURES PROPER EFFECTS IN PROCESSES OF BIOLOGICAL TREATMENT. 90 REFERENCES.

MJ PHENOLS, BIODEGRADATION.

MN ACTINOMYCES, BACTERIA, FUNGI, NUTRIENTS, PH, TEMPERATURE-DEPENDENCE, WATER, YEASTS.

ID ERDA-400301, ERDA-320500, ERDA-550200, TRANSLATIONS, WATER-POLLUTION-CONTROL, INDUSTRIAL-WASTES, WASTE-WATER-TREATMENT, SEWAGE-TREATMENT, NTISERDA.

AN N ORNL-TR-4037.

<1305>

AU ZEFF, JACK D. BARTON, RICHARD R. SMILEY, BOB. ALHADEFF, EZRA.

IN WESTGATE RESEARCH CORP MARINA DEL REY CALIF AND DEVELOPMENT COMMAND, WASHINGTON, D.C. 391630.

YR 74. 89P.

TI UV-OZONE WATER OXIDATION/STERILIZATION PROCESS.

NT FINAL REPT. 1 JUL 73-1 JUL 74.

PR PC$4.75/MF$2.25.

AB THE PURPOSE OF THIS PROGRAM WAS TO DETERMINE THE FEASIBILITY OF PURIFYING WATER USING THE COMBINATION OF OZONE AND ULTRAVIOLET RADIATION. IT WAS DISCOVERED FROM IN-HOUSE EFFORTS THAT THIS COMBINATION OF PURIFYING AGENTS WAS AN EFFECTIVE MEANS OF REMOVING BACTERIA AND ORGANIC CONTAMINANTS IN WATER. THE INITIAL OBJECTIVE OF THIS PROGRAM WAS TO DEFINE THE LEVELS OF OZONE AND UV RADIATION REQUIRED TO DESTROY PREDETERMINED CONCENTRATIONS OF MICROBIAL CONTAMINANTS AND ORGANIC SUBSTANCES IN WATER. THESE CONTAMINANTS WERE REPRESENTATIVE OF THOSE OFTEN FOUND IN WASTE WATER EFFLUENTS ENCOUNTERED BY THE ARMY AND NASA. THE STUDY WAS DIVIDED INTO TWO PARALLEL EFFORTS, A MICROBIOLOGICAL STUDY AND AN ORGANIC STUDY. THE MICROBIOLOGICAL INVESTIGATION HAS SHOWN THAT THE COMBINATION OF UV AND OZONE IS MORE EFFECTIVE IN DESTROYING E. COLI, STREPTOCOCCUS FAECALIS, KLEBSIELLA PNUMONIAE AND ACANTHAMOEBA CASTELLANII THAN UV OR OZONE ALONE. IN THE ORGANIC TESTS, THE TEST ORGANIC COMPOUNDS SELECTED WERE HYDROQUINONE, PYROGALLOL, XYLENOL, SODIUM ACETATE AND UREA.

MJ WATER-TREATMENT, OZONATION, ULTRAVIOLET-RADIATION, STERILIZATION.

MN IRRADIATION, BACTERIA, ORGANIC-COMPOUNDS, UREA, OXIDATION, PHENOLS.

ID CHEMICAL-REMOVAL-WATER- TREATMENT, MICROORGANISM-CONTROL- WATER, HYDROQUINONE, POTABLE-WATER, PYROGALLOLS, XYLENOLS, SODIUM-ACETATE, NTISDODA.

AN N AD/A-004 205/1SL.

<1306>

AU ZEFF, JACK D. SHUMAN, RAYMOND. ALHADEFF, EZRA S.

IN WESTGATE RESEARCH CORP MARINA DEL REY CALIF. 391630.

YR 75. 102P.

TI UV-OZONE WATER OXIDATION/STERILIZATION PROCESS.

NT ANNUAL REPT. 1 JUL 74-30 JUN 75.

PR PC$5.50/MF$2.25.

AB IN THE SECOND YEAR OF THE DEVELOPMENT OF THE UV-OZONE WATER/OXIDATION PROCESS, EFFORT WAS DIRECTED TO THE OXIDATION OF SPECIFIC INDIVIDUAL ORGANIC COMPOUNDS AND MIXTURES OF ORGANICS DISSOLVED IN WATER. ORGANIC COMPOUNDS OF INTEREST TO THE ARMY MEDICAL RESEARCH AND DEVELOPMENT COMMAND AND NASA WERE HYDROQUINONE, PYROGALLOL, XYLENOL, UREA, AND SODIUM ACETATE. OTHER COMPOUNDS ALSO EVALUATED WERE ETHANOL, GLYCEROL, GLYCINE, AND ACETIC ACID. PROCESS VARIABLES SUCH AS UV INTENSITY, OZONE CONCENTRATION, OZONE MASS FLOW, AGITATION, RESIDENCE TIME, TEMPERATURE, AND PH WERE EXAMINED ON A BATCH AND CONTINUOUS BASIS TO DETERMINE THEIR EFFECT ON OXIDATION EFFICIENCY AND THE POWER REQUIRED FOR GENERATING OZONE AND UV. ALL THE ABOVE VARIABLES, WITH THE EXCEPTION OF PH, AGITATION AND TEMPERATURE, HAVE A SIGNIFICANT EFFECT ON POWER DEMAND AND OXIDATION EFFICIENCY.

MJ WATER-RECLAMATION, WATER- TREATMENT.

MN OZONE, ULTRAVIOLET-RADIATION,

OXIDATION, EXPERIMENTAL-DESIGN, TEMPERATURE, OXIDATION, PH-FACTOR, DISINFECTION, PURIFICATION, WATER-SUPPLIES.
ID NTISDODXA.
AN N AD-A026 571/0SL.

<1307>

AU ZEITOUN, M. A. MCILHENNY, W. F. BISCAN, N. J. CULP, J. H. BEHRENS, H. C.
IN DOW CHEMICAL CO. FREEPORT, TEX. TEXAS DIV. ENVIRONMENTAL RESEARCH LAB. ADA, OKLA. 116 700.
YR 75. 214P*.
TI OPTIMIZING A PETROCHEMICAL WASTE BIO-OXIDATION SYSTEM THROUGH AUTOMATION.
NT FINAL REPT. 1973-74.
PR PC$7.75/MF$2.25.
AB SYSTEMS WERE DEVELOPED TO CONTROL THE CRITICAL PARAMETERS OF THE ACTIVATED SLUDGE PROCESS TO ACHIEVE RELIABLE, HIGH QUALITY EFFLUENT. THE WASTE WATER FROM A PETROCHEMICAL PLANT CONTAINED ETHYLENE GLYCOL AND WAS SOMETIMES SALINE. AN AUTOMATED SAMPLING SYSTEM, SAMPLING FEED AND HOMOGENIZED MIXED LIQUOR, MONITORED THE TOTAL CARBON IN BOTH SAMPLES. NUTRIENTS WERE ADDED IN PROPORTION TO THE TOTAL CARBON IN THE FEED, THUS MAINTAINING LOW RESIDUAL NUTRIENTS IN THE EFFLUENT. THE SLUDGE RECYCLE FLOW RATE WAS CONTROLLED BY A FOOD TO MICROORGANISMS SIGNAL, MEASURED AS THE RATIO OF TOTAL CARBON IN THE FEED TO THAT IN THE MIXED LIQUOR. TOXIC OR INHIBITORY EFFECTS OF THE FEED WERE MEASURED BY A BIOLOGICAL INHIBITOR DETECTOR, AN INSTRUMENT WHICH MEASURES THE OXYGEN UPTAKE OF STANDARD SOLUTIONS BEFORE AND AFTER EXPOSURE OF A BACTERIA SAMPLE TO A FEED SAMPLE AND CALCULATES AN ACTIVITY RATIO. THE USE OF THE INSTRUMENT AS AN UPSTREAM SENSING DEVICE WAS DEMONSTRATED AS TOXIC SUBSTANCES WERE ADDED TO THE FEED. THE DEVELOPED ON-LINE CONTROL SYSTEMS ARE APPLICABLE TO MUNICIPAL, INDUSTRIAL OR COMBINED TREATMENT PLANTS. A BIBLIOGRAPHY OF 63 REFERENCES IS INCLUDED.
MJ SEWAGE-TREATMENT, INDUSTRIAL-WASTE-TREATMENT, AUTOMATIC-CONTROL, ACTIVATED-SLUDGE-PROCESS.
MN CARBON, NUTRIENTS, OXIDATION, BIODETERIORATION, TOXICITY, DETECTORS, PILOT-PLANTS, BACTERIA, PH, OPTIMIZATION.
ID PETROCHEMICAL-INDUSTRY, BIOLOGICAL-INDUSTRIAL-WASTE-TREATMENT, NTISEPAORD.
AN N PB-247 160/5SL.

<1308>

AU ZHOLDAKOVA Z I. KOZITSKAYA V N.
YR 71.
TI CHARACTERISTICS OF PHENOLS IN PLACES WHERE BODIES OF OPEN WATER BLOOM.
SO HYDROBIOL J (ENGL TRANSL GIDROBIOL ZH). 7 (3). 71-73.
DE POLLUTION.
AN B 72080266.

<1309>

AU ZOBOVA, N. A. SOLENOVA, L. G. MAZMANIDI, N. D. IL'NITSKII, A. P.
IN INST. EKSP. KLIN. ONKOL. MOSCOW. USSR.
YR 76.
TI BENZO(A)PYRENE ACCUMULATION BY SOME BLACK SEA HYDROBIONTS UNDER EXPERIMENTAL CONDITIONS.
SO OKEANOLOGIYA (MOSCOW). 16. P464- 6. 1976.
LG RS.
DE BENZOPYRENE FISH MUSSEL.
AN C 08611066548.

<1310>

AU ZOGORSKI, JOHN S. FAUST, SAMUEL D.
IN RUTGERS--THE STATE UNIV. NEW BRUNSWICK, N.J. WATER RESOURCES RESEARCH INST.
YR 74. 96P.
TI REMOVAL OF PHENOLS FROM POLLUTED WATERS.
NT FINAL REPT.
PR PC$4.75/MF$2.25.
AB NINE GRANULAR ACTIVATED CARBONS WERE EVALUATED FOR THEIR EFFICIENCES TO REMOVE PHENOLIC COMPOUNDS FROM WATER. OF THESE, COLUMBIA LCK CARBON HAS SUPERIOR ADSORPTION CAPACITIES (. 177G 2,4-DICHLOROPHENOL PER GRAM CARBON) AND KINETICS OF ADSORPTION. CONSEQUENTLY, IT WAS CHOSEN FOR THE EQUILIBRIUM (ADSORPTION CAPACITY) KINETIC, AND COLUMN STUDIES. IN THE EQUILIBRIUM STUDIES 2,4-DICHLOROPHENOL AND 2,4-DINITROPHENOL WERE EMPLOYED AS MODEL COMPOUNDS TO EVALUATE SUCH VARIABLES AS (A) CONTACT TIME, (B) CARBON PARTICLE

SIZE, (C) PH VALUE, (D) TEMPERATURE, (E) PHENOL SOLUBILITY IN WATER, AND (F) COMPETITIVE ADSORPTION. THE EFFECT OF SEVERAL VARIABLES ON THE KINETICS (I. E. RATE) OF ADSORPTION OF 11 PHENOLIC COMPOUNDS ON COLUMBIA LCK CARBON WERE INVESTIGATED: (A) RATE OF STIRRER SPEED, (B) TYPE OF PHOSPHATE BUFFER, (C) TEMPERATURE, (D) PH VALUE, (E) COMPETITIVE ADSORPTION, (F) CARBON PARTICLE SIZE, (G) INITIAL PHENOL CONCENTRATION, (H) MOLECULAR SIZE OF THE PHENOL, AND (I) SUBSTITUTENT IN THE PARA POSITION ON THE PHENOL RING. SEVERAL EXPERIMENTS WERE PERFORMED WHERE PHENOLIC SOLUTIONS WERE PASSED THROUGH A FIXED BED OF CARBON.

MJ PHENOLS, ACTIVATED-CARBON-TREATMENT, WATER-TREATMENT.
MN KINETICS, ADSORPTION, PERFORMANCE-EVALUATION, CAPACITY, ACTIVATED-CARBON, SEWAGE-TREATMENT, INDUSTRIAL-WASTE-TREATMENT, PARTICLE- SIZE, TEMPERATURE, PH, FLOW-RATE, CONCENTRATION-COMPOSITION, COLUMNS-PROCESS-ENGINEERING, MOLECULAR-PROPERTIES.
ID WATER-POLLUTION-CONTROL, PHENOL-DICHLORO, PHENOL-DINITRO, CHEMICAL-STRUCTURE, NTISDIOWRT.
AN N PB-237 859/4SL.

<1311>

AU ZOULALIAN, V. BESSOU, F. TESSIER, A. CAMPBELL, P. G. VISSER, S. A. VILLENEUVE, J. P.
IN INST. NATL. RECH. SCI. UNIV. QUEBEC. QUEBEC. QUE.
YR 74.
TI DYNAMICS OF THE DEGRADATION OF PHENOL IN THE SAINT LAWRENCE RIVER.
SO PROC. INT. CONF. TRANSP. PERSISTENT CHEM. AQUAT. ECOSYST. PII, 53-8. 1974.
LG FR.
DE BIODEGRDN PHENOL RIVER WATER. OIL REFINERY EFFLUENT PHENOL BIODEGRN.
AN C 08308065111.

<1312>

AU ZUMBRUNN, J. P.
IN UNIV. PARIS. PARIS. FR.
YR 73.
TI DETERMINATION OF CYANIDES IN THE WASTE WATER FROM SURFACE TREATMENT.
SO SURFACES. P35-41; (79), 59-62; (80), 67-70. 1973.
LG FR.
DE CYANIDE DETN WASTE WATER. WASTE WATER ANALYSIS CYANIDE.
AN C 08012063572.

<1313>

AU ZUMBRUNN, J. P.
IN DEP. CHIM. SOC. AIR LIQ. AUBERVILLIERS. FR.
YR 73.
TI PURIFICATION OF WASTE WATER POLLUTED BY CYANIDES, SULFIDES, PHENOLS, ALDEHYDES, AND DERIVATIVES BY PEROXIDE PRODUCTS.
SO TRIB. CEBEDEAU (CENT. BELGE ETUDE DOC. EAUX AIR). 26. P332-41. 1973.
LG FR.
DE WASTE WATER OXIDN PURIFN. POLLUTANT OXIDN REMOVAL WATER. CYANIDE OXIDN REMOVAL WATER. SULFIDE OXIDN REMOVAL WATER. PHENOL OXIDN REMOVAL WATER. ALDEHYDE OXIDN REMOVAL WATER.
AN C 08004019176.

<1314>

AU ZYABBAROVA, S. A. KUKLINA, M. N.
IN LENINGR. SANIT.-GIG. MED. INST. LENINGRAD. USSR.
YR 73.
TI SOME ALIPHATIC AMINES IN THE PROBLEM OF THE SANITARY PROTECTION OF RESERVOIRS.
SO VOPR. GIG. VODOSNABZH. SANIT. OKHR. VODOEMOV, MATER. RESP. NAUCHNO-PRAKT. KONF. P64-5. 1973.
LG RS.
AV AKULOV, K. I.
DE BUTYLAMINE TOXICITY WATER. AMINE BUTYL TOXICITY WATER.
AN C 08512078421.